

# Manufacturers Record

Reg. U. S. Patent Office



APRIL 1933

25 CENTS A COPY

## PROGRESS

Despite the confusion of the moment and the fact that thousands of banks are either entirely closed or only open on a partial basis, there are many indications of a better tone in business and news of actual happenings that are encouraging.

Elsewhere in this issue we are referring to the momentous decision of the Supreme Court, which opens a way for industry to stop cut-throat competition and below cost selling, which has reacted upon labor and in the end contributed to unemployment. Competent students of affairs believe that this decision makes it possible for industry in many lines to proceed now with confidence to increase trade through constructive methods.

Southern railroads report increased earnings by reason of economies put into effect, and definite increase in freight tonnage. The Norfolk & Western Railway Co. in February had the best month in net it has had for a long time.

The Associated Press carries dispatches from Southern financial centers that the bank crisis is practically over. Deposits have shown a marked increase in many cities in the past two weeks.

Perhaps what is most encouraging of all is the definite inquiry and demand on the part of new industries for machinery and supplies, which has manifested itself in the past month. The individual enterprise, the decentralized business, is entering upon a new day where initiative and energy will be repaid.

In this issue there is shown from census reports some of the progress the South has made in the recent past in its manufactures in comparison with other depression years. Its record of output is more favorable than that of other parts of the country, and unemployment in manufacturing here is less proportionately than elsewhere.

Of tremendous importance is the accomplishment of Dr. Herty in making newsprint of greater strength and better quality, that may be sold at a lower price, from slash pines only seven years old. An almost unlimited field is opened up for the creation of new wealth in the Southern States where there are millions of acres of idle land and cut over lands that will grow pines in abundance. This will remove the necessity of buying our pulpwood from other countries.

America has every reason to be brighter today than it was a month ago.

# *A Wonderful Value:* INTERNATIONAL HARVESTER ANNOUNCES A NEW 2-TON TRUCK

AT \$ **995** for 145-in. wheelbase chassis,  
f. o. b. factory (tax extra)



OFFICIAL registrations on all new trucks of 2-ton capacity and over, sold in 1932, show that better than ONE in every FIVE is an International. This is nearly 22 per cent, yet 49 other manufacturers competed for this great market. The next nearest builder sold but half as many. In the heavy-duty truck field International *leads the field*. (Figures from R. L. Polk & Co.)

There are three reasons for such preference for Internationals in a year of careful buying: (1) long-lived efficiency, (2) operating economy, and (3) matchless International Harvester after-sale service.

\* \* \* \*

AND NOW INTERNATIONAL HARVESTER OFFERS YOU THIS GREAT 2-TON TRUCK VALUE, AT \$995. Branches and dealers will be proud to show you this brand-new model, the B-4, which brings you at a remarkably low price the same high standards of quality in materials, engineer-

ing, and construction that made the International sales record possible.

The new B-4 is International-made — thoroughly modern from stem to stern. Note the brief description below. Visit one of our display rooms, get acquainted with this great 2-ton International value. And remember that International Harvester also offers parallel values in the smaller sizes, with a new Half-Ton, 6-Cylinder truck at \$360, and a popular 1½-ton model at \$615, prices for the chassis f. o. b. factory.

INTERNATIONAL HARVESTER COMPANY  
606 S. Michigan Ave. OF AMERICA Chicago, Ill.  
(INCORPORATED)

## Model B-4 Features

**Frame:** 8-inch channel type; 7 sturdy cross members.

**Engine:** 6-cylinder. Bore: 3½-in.; stroke, 4-in.; develops 63 h. p. Removable cylinders. Counterbalanced crankshaft. Exhaust-valve seat inserts. Full-pressure lubrication. Thermostatically-controlled cooling. Down-draft carburetion. Air cleaner.

**Transmission:** Four speeds forward, one reverse.

**Universal Joints:** Roller-bearing type.

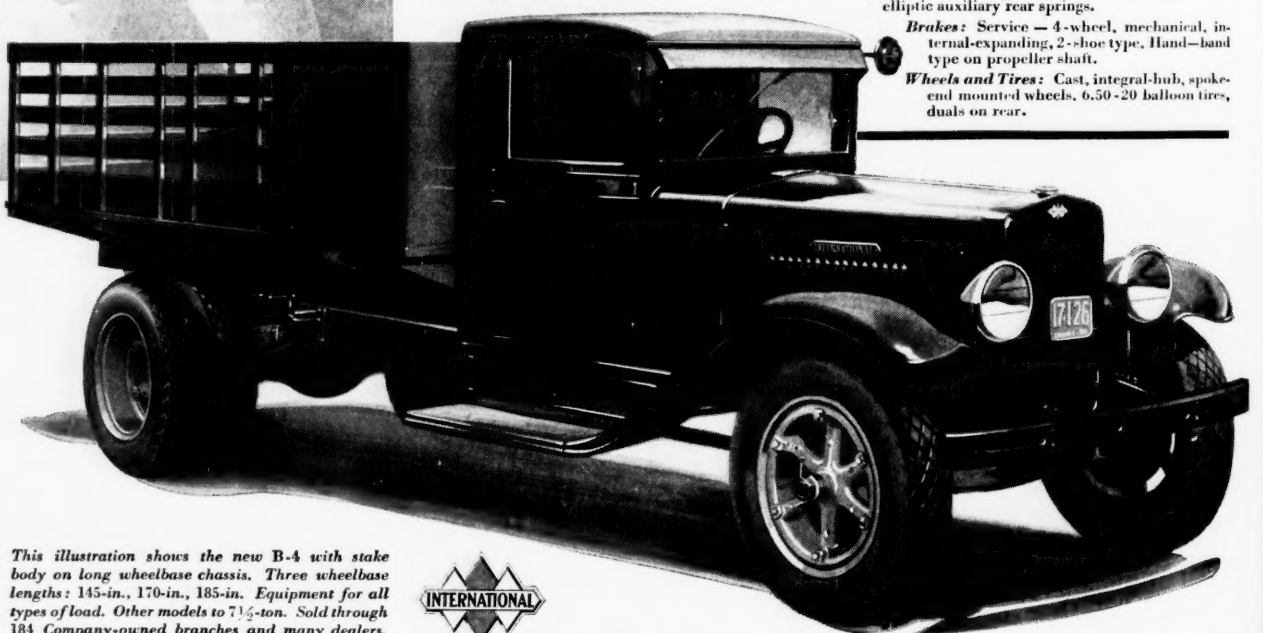
**Steering Gear:** Cam-and-lever type.

**Rear Axle:** Full-floating spiral-bevel-gear type. Straddle-mounted pinion.

**Springs:** Semi-elliptic front and rear, with semi-elliptic auxiliary rear springs.

**Brakes:** Service — 4-wheel, mechanical, internal-expanding, 2-shoe type. Hand—hand type on propeller shaft.

**Wheels and Tires:** Cast, integral-hub, spoke-end mounted wheels, 6.50-20 balloon tires, duals on rear.



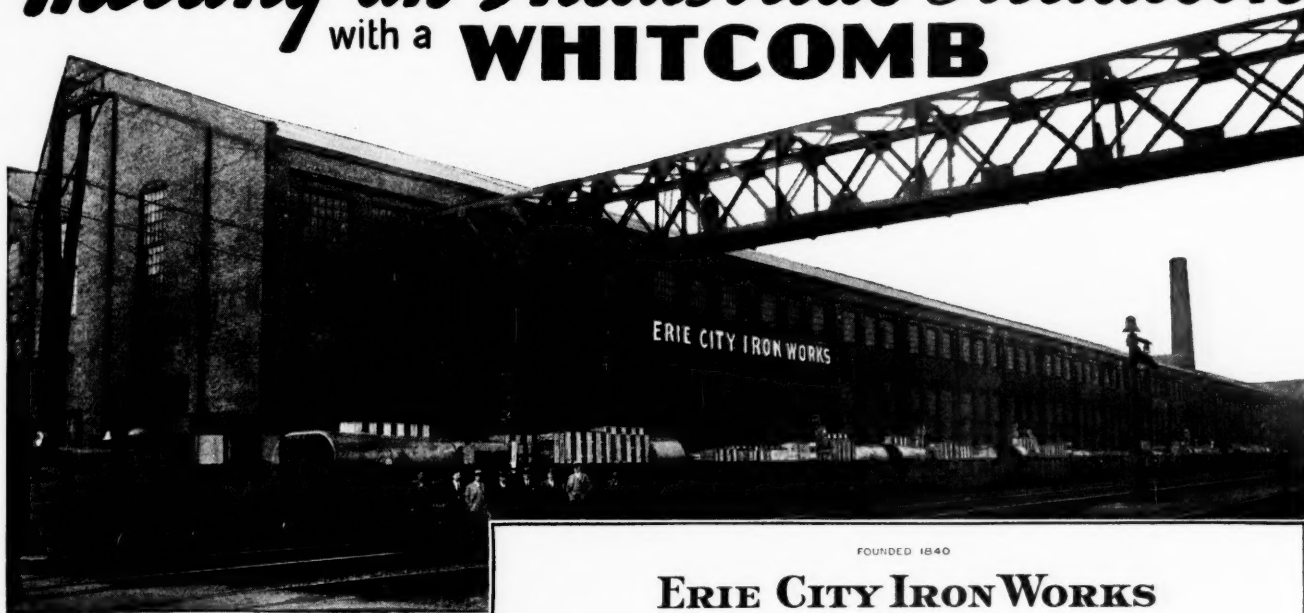
This illustration shows the new B-4 with stake body on long wheelbase chassis. Three wheelbase lengths: 145-in., 170-in., 185-in. Equipment for all types of load. Other models to 7½-ton. Sold through 184 Company-owned branches and many dealers.



# INTERNATIONAL TRUCKS

# Meeting an Industrial Situation

with a **WHITCOMB**



Showing Whitcomb Locomotive in operation at Erie City Iron Works.



**STOP HAULAGE WASTE**

Whitcomb replaces steam locomotive.

Whitcomb economy service reduces costs.

Always ready for service.

Whitcomb operation costs much less than steam.

Send for latest bulletin on Industrial haulage problems.

**THE WHITCOMB LOCOMOTIVE COMPANY**

Subsidiary of The Baldwin Locomotive Works

ROCHELLE

ILLINOIS

FOUNDED 1840

## ERIE CITY IRON WORKS

STEAM POWER PLANT EQUIPMENT

N. M. WALLACE  
PURCHASING AGENT

**ERIE, PA.**

December 16, 1932

The Whitcomb Locomotive Company  
Rochelle, Illinois

Attention: Mr. C. W. Chappelle

Gentlemen:

Replying to your letter of November 30th, we placed in service one of your 20 ton Whitcomb gasoline locomotives in January 1930. This locomotive replaced a steam locomotive that we had previously used for a number of years for plant switching.

Due to the layout of our plant and the numerous different shops to be served our plant locomotive is called upon for considerable switching and we have found the Whitcomb to be very satisfactory not only from the standpoint of service but also because of its flexibility and the substantial cost reduction afforded.

Another feature of this locomotive which appeals to us very much is that it is always ready for service on a moment's notice. This feature has been especially valuable during the present period of depression.

We are attaching photograph of our Whitcomb coupled with one of our shipments of boilers which we made to Russia in 1930. This picture was taken on the New York Central Siding adjacent to our boiler shop.

We have had this locomotive in service now about three years and our experience with this has been very satisfactory. We have had very little difficulty with it and the cost of operation has been much less than the steam locomotive.

Yours very truly,  
ERIE CITY IRON WORKS

N. M. Wallace  
Purchasing Agt.

NNW:LEB  
enc.



# WHITCOMB LOCOMOTIVES

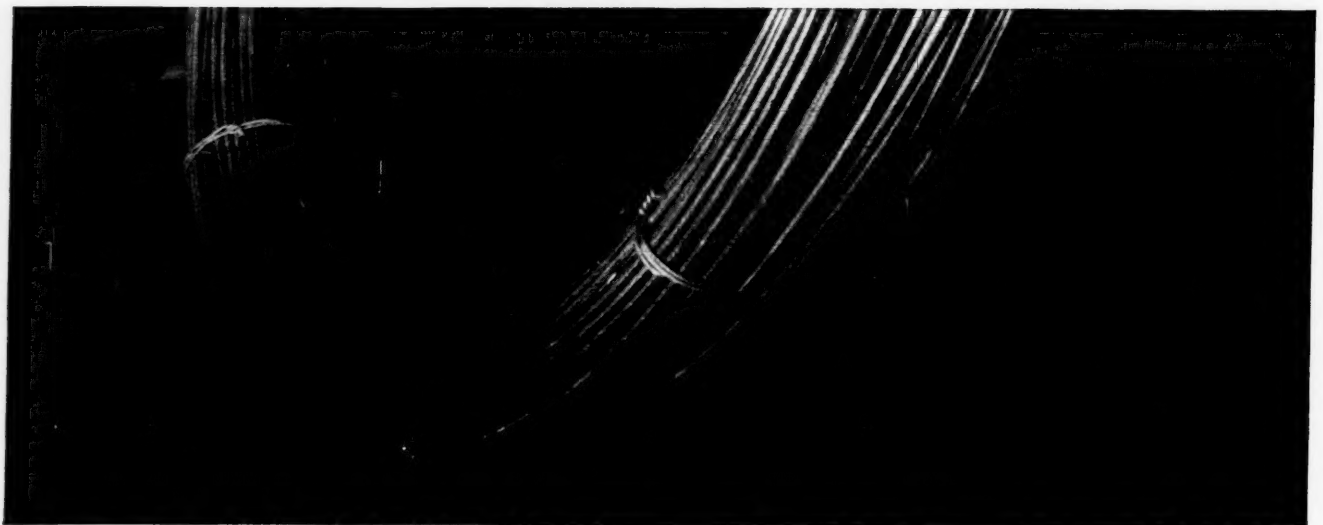
APRIL NINETEEN THIRTY-THREE



# YOUNGSTOWN



## MANUFACTURERS



## WIRE

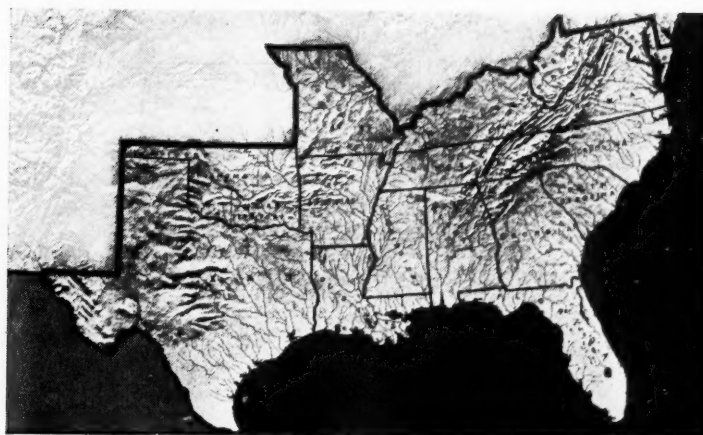
Special analysis Wire to exacting specifications.  
THE YOUNGSTOWN SHEET AND TUBE COMPANY  
General Offices - - - YOUNGSTOWN, OHIO



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1933**

Vol. CII No. 4



The South has 31.8 Per Cent of the Land Area and 33.6 Per Cent of the Population of the United States

## MANUFACTURERS RECORD

Devoted to the Upbuilding of the  
Nation Through the Development  
of the South and Southwest as the  
Nation's Greatest Material Asset

*Published Monthly*

by the

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PUBLISHERS DAILY CONSTRUCTION BULLETIN AND  
BLUE BOOK OF SOUTHERN PROGRESS

Member, A.B.C.

APRIL NINETEEN THIRTY-THREE

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## A Step Up

**A** STEEL Stadium properly designed and constructed is the most economical and lasting seating investment that a school or community can make. Steel is the strongest and most adaptable material known and its use in a stadium enables economies and facilities that cannot be had otherwise.

The Virginia Bridge Stadium is built of steel throughout except for raised wooden seats on steel brackets. The seat and foot arrangement is the most comfortable that has been devised.

The steel deck is readily made watertight and the underpart can then be enclosed and finished up into class rooms, locker rooms, showers, etc., at great saving in combined cost.

We shall be glad to furnish designs and estimates on any size and arrangement of stadium.

### VIRGINIA BRIDGE & IRON CO.

Roanoke, Birmingham, Memphis, Atlanta, New Orleans  
New York, Los Angeles, Charlotte, Dallas, El Paso  
Plants at Roanoke—Birmingham—Memphis

The Stadium above, we built for the University of New Mexico at Albuquerque. It has a seating capacity of 4800, is 186 feet long, 42 rows deep. The steel deck has been welded throughout to make it watertight.

With the watertight deck serving as the roof and with the supporting steelwork having been readily spaced for the best arrangement of the underpart, the University has wisely planned to provide various rooms, showers, etc., at a very nominal cost.

Entrance to the Stadium is from the rear through conveniently spaced openings.

# VIRGINIA BRIDGE

## Steel Structures



*Longer Lasting*

**PennVERNON**  
*flat drawn*  
**WINDOW GLASS**

## **WINDOW BEAUTY**

**W**INDOWS—they can mar or enhance the architectural beauty of a finished building. And whether they will detract or add to the building's attractiveness depends largely upon the kind of window glass with which they are glazed.

Pennvernon Window Glass has been found by architects everywhere to possess the qualities essential to window beauty. This glass is distinguished by an unusual clearness and transparency, a remarkable freedom from the imperfections which distort vision, and a brilliance of surface on both sides of the sheet which results in much better reflection.

But Pennvernon's greater beauty is only half the story. Its beauty *lasts longer*, too. That's because the

special process of flat drawing by which Pennvernon is manufactured assures a smoothness and density of surface which makes Pennvernon highly impervious to wear and abrasion.

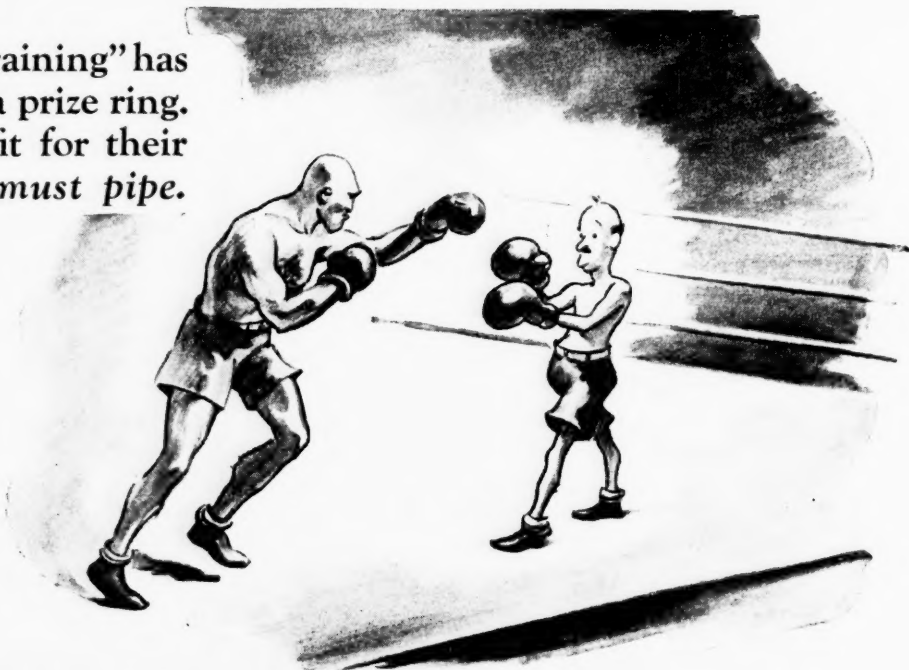
Greater beauty and longer lasting beauty at no extra cost—we suggest that you investigate this finer window glass. It is available in single or double strength and in standard thicknesses up to  $\frac{1}{2}$ ", at the warehouses of the Pittsburgh Plate Glass Company in all important cities and through progressive glass jobbers. Write to us for samples and for our booklet describing the interesting process of Pennvernon manufacture. Pittsburgh Plate Glass Company, Grant Bldg., Pittsburgh, Pa.



APRIL NINETEEN THIRTY-THREE



a man "out of training" has no business in a prize ring. Men must be fit for their jobs—and so must pipe.



## For these TOUGH Jobs— *Pick Pipe That Can Take It!*

It's all right to put in untried pipe—experimental alloys of this and that—when you are looking for only a few years of service, or where service demands are easy. But where pipe must **LAST** under the tough conditions imposed by *specific hard-service installations*, you need the **PROVED** endurance of Reading Puddled Iron.

For the uses described on this page, Reading Puddled Iron Pipe stands without an equal. That has been demonstrated by more installations, over a longer period of years, than any other kind of pipe can show. Insist on **READING** for lowest-cost service in these uses. If you need pipe for a "hard-service spot," write us.

### ● *For Cold and Hot Water Lines*

Reading Puddled Iron Pipe assures *generations* of trouble-free service with all ordinarily corrosive waters. In thousands of such installations, it has been proved that the life of Reading Pipe is from two to five times longer than that of ordinary pipe.

### ● *For Drains*

Alternating wet and dry conditions often mean swift death for most kinds of pipe. Reading Puddled Iron Pipe is especially adapted to give long service under such conditions.

### ● *For Heating Supply Risers, Distributing Mains and Return Lines*

Due to its high melting point (300 Degrees F. higher than that of steel) and because of the presence of non-metallic silicate, Reading Puddled Iron is far less subject to destructive oxidation than other ferrous metals.

### ● *For Vents*

When exposed to atmospheric corrosion, Reading Puddled Iron Pipe forms *two* hard, impervious films of oxide which effectively prevent destructive pitting and penetration of rust. Corrosion is actually *stifled*.

SINCE 1848  
**READING IRON COMPANY PHILADELPHIA**

*Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Iron*  
MANUFACTURERS RECORD FOR

"I can't do 100-miles-an-hour .  
... *but give me an oil that can*"



## GULF SUPREME MOTOR OIL

*"The 100-Mile-An-Hour Oil"*

### WARNING

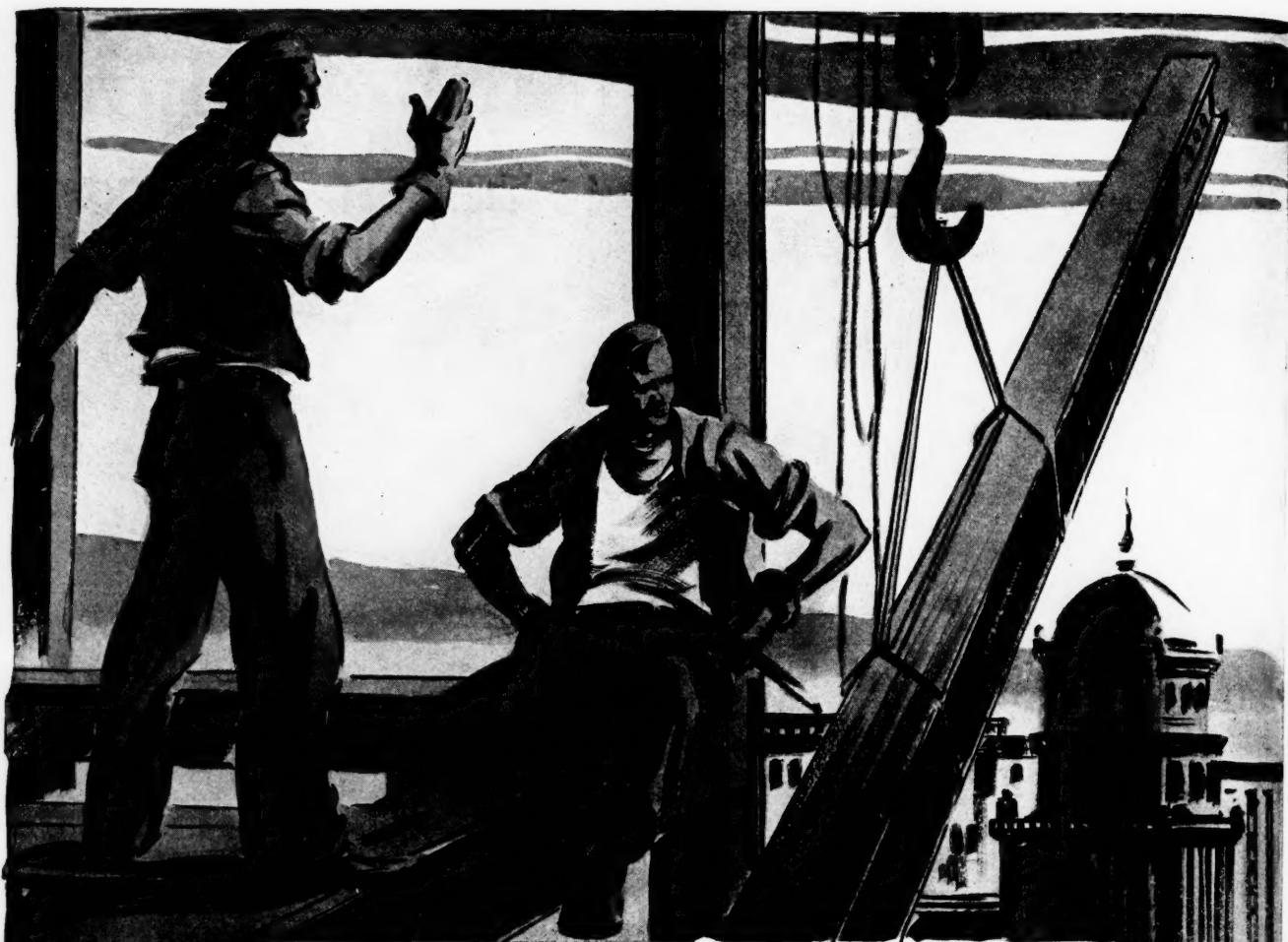
OIL that isn't good at  
high speeds, isn't good  
enough at *ANY* speed!



AND WHEN YOU BUY GASOLINE

GET <sup>THAT</sup> <sup>GOOD</sup> GULF  
—*it's fresh!*

APRIL NINETEEN THIRTY-THREE




## TO BUILD RIGHT — — BUY RIGHT !

**Remember—**Tennessee Structural Steels are *right* in quality . . . *right* in finish . . . *right* in section and length . . . and are shipped *right on time*—a service you will appreciate.

**Tennessee Coal, Iron & Railroad Co.**

General Offices: Brown-Marx Bldg., Birmingham, Ala.

SUBSIDIARY OF UNITED  STATES STEEL CORPORATION

# TENNESSEE



# • Manufacturers Record •

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## A MOMENTOUS DECISION

THE recent Supreme Court decision in the Appalachian Coals case marks the beginning of a new era for business. It clarifies the extent to which industrial groups may go in cooperative effort and will unquestionably bring about far-reaching beneficial results for business and employment.

Business has been seeking, for years, an interpretation of the anti-trust laws that would enable it to proceed on definite lines in working out of difficulties of over-production and reckless competition. Heretofore no business group could establish reasonable plans to curtail production or distribution within their industry, clearly to the benefit of the public, without the danger of being charged with breaking the Sherman law. This decision of the Supreme Court lays down a course that now may be followed toward stabilization.

Gilbert H. Montague of the New York Bar, an authority on anti-trust legislation, believes that this decision in the coming months may turn out to be one of the most important factors in expediting economic and business recovery throughout the United States. He writes:

"Whatever tends to eliminate waste in the distribution of goods from the producer to the consumer helps toward the rebuilding of American prosperity upon the absolutely sound foundation of deflated costs. This is precisely the opportunity that the Appalachian Coals decision now affords to dozens of industries that today are suffering from useless duplication of costly distributing equipment and from wasteful paralleling of expensive sales effort.

"Prior to the Appalachian Coals decision, the only sure cure for competitive waste was to integrate the competitive units in a single corporation.

"In the Appalachian Coals case the Supreme Court has now decided that it is equally lawful to cure competitive wastes by bringing the competitive units together in a common selling agency that will leave undisturbed the individual status and ownership of each competing unit, provided always that there remains outside the common selling agency enough rival competing units of sufficient strength and activity to insure the continuance of actual competitive conditions at substantially every point throughout the industry."

The Supreme Court decision is hailed as a new charter by forest products industries, textile manufacturers, and other basic industries of the country. Wilson Compton, president of the American Forest

Products Industries, says the Appalachian Coals case is the door to a period of great improvement in lumber manufacturing and merchandising. The decision removes one of the greatest handicaps under which the forest industries and others similarly situated have labored in their efforts to free themselves from a mass of oppressive burdens. The greatest gain is the judicial recognition of the fact that reasonable cooperative selling and other constructive agencies may be established, in so far as they promise to promote orderly production and marketing, greater continuity of industry and greater security of employment.

The formation several months ago of the Appalachian Coals, Inc., as a selling agency, composed of bituminous coal producers in Virginia, West Virginia, Kentucky and Tennessee who control about 70 per cent of the coal produced in that area, was declared a violation of the Sherman Law by the lower court on the ground that the agency wiped out competition and affected prices. The coal operators then carried the case to the Supreme Court.

The coal producers were endangering their capital investment because of waste competition and they joined together for mutual protection and benefit of the industry. The organization was effected in an effort to increase sales and production through more efficient distribution methods, advertising and research to reduce marketing costs and eliminate destructive trade practices.

Concurring in this, the Supreme Court reversed the lower court's decree and declared that anti-trust laws do not forbid cooperation for the improvement of business conditions; they forbid monopoly and restraint of trade. In the decision, written by Chief Justice Hughes, this opinion was expressed:

"The fact that the correction of abuses may tend to stabilize a business or produce fairer price levels does not mean that the abuses should go uncorrected or that cooperative endeavor to correct them necessarily constitutes an unreasonable restraint of trade. The intelligent conduct of commerce through the acquisition of full information on all relevant facts may properly be sought by the cooperation of those engaged in trade, although stabilization of trade and more reasonable prices may be the result. Putting an end to injurious practices, and the consequent improvement of the competitive position of a group of producers, is not a less worthy aim and may be entirely consonant with the public interest where the

group must still meet effective competition in a fair market and neither seeks nor is able to effect a domination of prices."

This victory for common sense and justice for industrial groups seeking the right to take measures for self-protection without conflict with the proper interpretation of anti-trust laws is universally applauded. It opens a door of hope for hard pressed industries that have been waging a losing struggle against over-production, wasteful distribution, unfair competition and price cutting below the cost of production which have demoralized business for the past three years.

With the announcement that James D. Francis, Island Creek Coal Company, Huntington, W. Va., has been elected president, and C. C. Dickinson, Charleston, W. Va., chosen chairman of the Executive Committee of the Appalachian Coals, Inc., this regional marketing agency will administer the selling of coal from eastern Kentucky, northern Tennessee and southern West Virginia. Formation of the Northern Coals, Inc., to regulate the selling policies of coal companies in Ohio and the northern District of West Virginia, also has been effected. The way is now cleared to chart a course for sound business development not only in the coal industry but in many other lines.

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## AN UNWISE MOVE

A PRESS dispatch carries the information that Senator Norris, after a conference with the President, predicts the passage of the bill for Government operation of Muscle Shoals for the production of power and nitrates.

Based on the President's assurance that the emergency-employment work of forestation and prevention of soil erosion to be undertaken will not compete with existing private business and employment, it is not logical to assume that he intends to have the government become a competitor of the private power and fertilizer industries. Dependable surveys show that Government operation would be duplication of effort and most uneconomical as the nitrate plants are admittedly obsolete to the point of worthlessness. Furthermore, there is a surplus of power and fertilizer capacity in the efficient privately owned plants now established and on part time.

Muscle Shoals development by the Government was essentially for the purpose of supplying nitrate during the emergency of the World War and as the nation's productive capacity has been made ample for all peace and war time demands for nitrates, there is no sound reason for additional public expenditures in that direction. As a source of hydro-electric power Muscle Shoals is valuable. Unless we are to have government ownership and operation of all public utilities, the Government should dispose of its holdings by sale or lease.

The MANUFACTURERS RECORD has repeatedly expressed itself on the subject of government operation of this great natural resource, and in the February number pointed out that we are "not unmindful of the benefits the whole Tennessee Valley would receive

from the full development of Muscle Shoals. We want to see that section busy and prosperous if it can be brought about without jeopardizing existing investments or adding extra burdens on the taxpayers who must put up the capital and stand any losses that might be incurred in Government operation."

Government in business has become a very serious thing. The Shannon Committee, after examining 625 witnesses, says in its report—"the operations of the Government in the field of private enterprises have reached a magnitude and diversity which threaten to reduce the private initiative, curtail the opportunities and infringe upon the earning powers of taxpaying undertakings while steadily increasing the levies upon them."

America is passing through a serious crisis. The Government has colossal undertakings in its attempts to solve the banking problem, the serious condition of unemployment and in meeting the demands of those who stress what they believe to be the paramount problem of the farmer.

It is unnecessary and unwise at this time, or any other time, in our judgment, no matter what the investment has been at Muscle Shoals, to enter further into competition with private business and set up a government enterprise that will be not only destructive to those who have pioneered in this field, but which, in the very nature of things, operated by the Government, no matter how well meant the purpose, may prove so costly and extravagant to the taxpayers as to offset any supposed good it might accomplish. The history of government undertakings proves this.

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## NEW BUSINESS IN A DEPRESSION YEAR

ALONG the lines of the Illinois Central System reaching through the Mississippi Valley to the Gulf 624 new industries have been established in the past four years. Investment in these new enterprises amounted to \$29,000,000, or only 8 per cent below the figures reported in the more prosperous period of 1925-1928. More complete details about this industrial expansion during the depression are given elsewhere in this issue.

New industries are being established through the South as we have listed them in these columns month by month and in the DAILY CONSTRUCTION BULLETIN. Individuals and concerns are seeking advantageous locations or information with the view to establishing enterprises of practically every conceivable nature. With returning confidence and business improvement many more dormant projects will be started.

More than 200 active prospects are reported on the lists of the New Industries Division of the Alabama Power Company, with 2000 inquiries tabulated that in the near future should mean material development. Other interests in other parts of the South are receiving requests for information about possibilities for the development of new enterprises.

The MANUFACTURERS RECORD'S DAILY CONSTRUCTION

MANUFACTURERS RECORD FOR

BULLETIN has noted a marked increase in the number of individual items published from day to day of machinery wanted by concerns in a variety of lines. For months past these items have been noticeable by their absence. Most of the activity has been on government jobs. Inquiries are being received daily for machinery to equip plants and industries that are at least being considered in many localities.

Many successful businesses had their start in depression years. Howard E. Blood, president of the Norge Corporation, recently cited a few of the great concerns of the country which began in former depression times—the Baldwin Locomotive Works; Case machine implement business; Henry Disston & Sons; Wannamaker's; John B. Stetson Co.; Kimball Co.; W. L. Douglas Shoe Co.; Swift & Company. Contrasted with the opportunity of early days of American development there are manifold opportunities now for the prospective buyer and builder to profitably invest in America's future.

## SOUTHERN MANUFACTURES

**\$7,364,000,000**

**T**HAT Southern manufactures have been less affected by the continued business depression than those elsewhere in the United States is strikingly shown in recent figures released by the Census Bureau. Based on trade reports and construction contracts it is evident that the South in 1932 and in the first quarter of 1933 made a proportionately better showing in manufacturing than the country as a whole. The textile industry has been operating at over 90 per cent of capacity on a single shift basis.

Excepting the abnormally high valuation of manufactured output during the boom period and the war-time prices of 1919, the aggregate value of Southern manufactures in 1931 was in excess of any other year. A fairer appraisal of industrial conditions can be made if we compare the principal census items of the depression years 1931, 1921 and 1914, the last year before the World War, when the country was experiencing a mild depression before demand for war supplies spurred activity. This comparison reflects the steady growth of manufacturing in the South even when census returns of the depression years are used as a base, for the declines in the South did not touch the previous low points.

Manufacturing in the Southern States in 1931 had an aggregate value of \$7,364,000,000 as compared with \$6,878,000,000 in 1921 and \$3,700,000,000 in 1914. The rest of the country, however, failed to match the South's record. The value of the manufactured output of the United States in 1931 was \$41,521,000,000 compared with \$43,653,000,000 in 1921 and \$23,987,000,000 in 1914.

Emphasizing the comparison and the South's position in manufacturing, the total value of manufac-

tures for the rest of the country in 1931 was \$2,620,000,000 below the 1921 figures as compared with an increase of \$487,000,000 for the South. Also, while the value of manufactures in the rest of the country increased 66 per cent from the prewar year 1914 to 1931, the South showed a gain of 96 per cent.

It is of interest to note that the value added by manufactures in the South as shown by the appended table increased from \$2,666,000,000 in 1921 to \$3,435,000,000 in 1931, a gain of \$769,000,000, or about 29 per cent, and that during this period the increase reported for the rest of the country was \$902,000,000, or less than 5 per cent.

In 1931 Southern manufacturers expended \$3,929,000,000 for materials, fuel and power, or 18 per cent of the total amount expended by all the manufacturing plants of the country. The decline in the South's total between 1921 and 1931 was \$282,000,000 as compared with the decline of \$3,521,000,000 in the rest of the country.

Further progress of the South in depression years is shown by comparison of other major items of the census. In the average number of wage earners in manufacturing, the South made successive gains in 1914, 1921 and 1931, while the number declined in the rest of the country in 1931 as compared with 1921 and 1914. The likelihood that the proportion of part-time employment was larger in 1931 than in former years should be taken into account, but this does not materially change the basic figures. The aggregate amount of wages paid in the manufacturing establishments of the South was slightly below 1921 but 86 per cent above 1914. Total wages paid by manufacturers located outside of the Southern States were about 10 per cent less than in 1921 although they were 76 per cent more than in 1914.

As a manufacturing census is taken every two years, no comparable figures for 1932 are available but it is conceded that manufacturing activity slowed down considerably during most of 1932 and yet there is no evidence to show that it dropped to the \$23,987,000,000 reported for the 1914 production. With the great industrial development of the South since the World War the value of its manufactured output in 1932 was easily \$1,000,000,000 in excess of the 1914 total.

### CENSUS OF MANUFACTURES

	1921	1931
Wage earners, average number		
South .....	1,273,642	1,337,813
Rest of country.....	5,672,928	5,199,320
Total United States.....	6,946,570	6,537,133
Wages		
South .....	\$1,191,608,000	\$1,128,948,000
Rest of country.....	\$7,010,716,000	\$6,126,744,000
Total United States.....	\$8,202,324,000	\$7,255,692,000
Cost of materials and power		
South .....	\$4,212,358,000	\$3,929,514,000
Rest of country.....	\$21,108,697,000	\$17,587,666,000
Total United States.....	\$25,321,055,000	\$21,517,180,000
Value of products		
South .....	\$6,878,565,000	\$7,364,610,000
Rest of country.....	\$36,774,718,000	\$34,156,537,000
Total United States.....	\$43,653,283,000	\$41,521,147,000
Value added by manufacture		
South .....	\$2,666,203,000	\$3,435,094,000
Rest of country.....	\$15,666,024,000	\$16,568,873,000
Total United States.....	\$18,332,227,000	\$20,003,967,000





Part of a Fleet of  
15 Buses for Raleigh,  
N. C.

Hackney bodies on  
Corbitt chassis

## MOTOR COACHES FOR CITY TRANSPORTATION

**S**IGNIFICANT movements that may be destined to change altogether existing methods of city transportation are under way in different parts of the country. The facts, when brought together, are extremely important, not alone from the new investment that is taking place in replacing car lines with buses, but from the standpoint of a complete change from fixed rails and methods as we have known them for so many years, to the motor coach with its flexibility and adaptability to the kind of service and schedules not possible heretofore. The results of what is being done are being carefully studied by experts in urban transportation. The movement is particularly significant in the Southern states and the following facts will prove of interest.

In Jacksonville, Florida, a city of 120,000 population, it is proposed to replace electric street railway facilities with a fleet of motor buses to cost approximately \$1,500,000. The Motor Transit Company is already operating under a fran-

chise which includes a provision that calls for the elimination of street cars and the substitution of buses of modern type. Bondholders of the old Jacksonville Traction Company formed the new organization and the directors authorized the purchase of 24 "Twin Coaches" of the latest type at a cost of \$180,000. These coaches are the nucleus of a fleet of 86, which the company plans to purchase to completely motorize Jacksonville's transportation system.

The first buses to be used were placed on two of the heaviest patronized trolley routes, which daily moved thousands of

people to and from the business section.

The majority of the new buses will have a seating capacity of 30 passengers. The smallest will hold 15 passengers. They are designed to give maximum riding comfort and complete visibility on four sides. They are equipped with modern safety appliances and tires of the balloon-cushion type. The motive power is sufficient for speed, comparable to private motor cars. Exhaust noises will be minimized as well as gas fumes. In operation they can be brought close to the curb for convenience of passengers entering or leaving, and safety is promoted by making it unnecessary for the rider to step into the street.

At Raleigh, N. C., a new street transportation system was inaugurated February 15 by the Carolina Power & Light Company. The car barns were converted into storage and repair garages, and 18 modern buses were placed into service, including 15 which were purchased from the Corbitt Company of Henderson, N. C., and fitted with bodies from the shops of the Hackney Bros. Body Co., Wilson, N. C.

These new buses are of the 18 passenger type and incidentally with their in-

Interior of One of the 30-passenger Twin-Coaches in Use in Jacksonville



auguration a five cent fare was brought back. This applies within city limits, but an additional five cents is charged on extended lines.

It is planned to either remove the old rails, or cover them with a street resurfacing material.

In San Antonio, Texas, a city of 231,000, there is an example of one of the largest cities in the country initiating a complete conversion from electrically operated street cars to gasoline driven coaches and buses. The Public Service Company entered into an agreement to pay the City Commission \$250,000 for permission to abandon its street car system of 81 miles, and to add 65 new buses at a cost of \$350,000. These new buses to be in addition to 100 buses already in use.

The first lot of 10 new vehicles were delivered under their own power from the factory of the Twin Coach Corporation of Kent, Ohio, early in February and additional quantities will be delivered shortly.

The President of the company advised the City Council it is the plan to replace each existing car line with a bus line, running substantially along the same route outside the business district, and giving at least as good frequency of service.

## Jacksonville, Fla.; San Antonio, Tex.; Raleigh, N. C.; Pine Bluff, Ark.; Columbus, Ga., and St. Louis, Mo., Are Among the Latest Southern Cities to Install or to Consider the Use of Motor Buses for Mass Transportation

cents for short trips to fifteen cents to suburban points.

At Pine Bluff, Ark., the Arkansas Power & Light Company has substituted motor vehicles on two street car lines and is considering the use of motor buses entirely. The company has submitted to the City Council a plan for this substitution and offers to pay the city \$15,000 in cash and \$250 each month for a period of 18 months for permission to discontinue street car service.

White buses were adopted on the lines where the substitution has already been made, and three 21-passenger Ford buses have been purchased.

The Columbus, Georgia, Transportation Co. placed an order for 13 new passenger buses. This is a subsidiary of the Georgia Power Co. and it is expected service will start May 1 on all routes in Columbus, with the highest standards of comfort and reliability for passengers.

These new buses will have a number of features especially designed. Motors will be 68 horsepower, and wheel base 169 inches. They are designed for 18 passengers each, having specially constructed springs and a new silent transmission together with a special clutch intended to increase smoothness of operation. The chassis were built by the White Co. and the bodies by the Hackney Body Co.

The movement is growing throughout the country at a significant rate. This is due no doubt to the greater flexibility of handling vehicles without limitations imposed by fixed rails. It has been found that schedules can be maintained and there is less delay in traffic congestion. The public of today is clearly motor-minded.

Street railways have been confronted with competition that it is difficult for them to meet on the part of taxicabs that have increased in numbers like mushrooms over night, and are forcing established railway lines, handling city and suburban transportation, to consider methods to save themselves.



One of Large Type Twin-Coaches Serving Residential Section of Jacksonville, Fla.

vice, and to bring all bus lines closer in to the business section of the city. No two lines will be connected and unavoidable delays on one will not affect the service of another, while each line will loop back from the business district.

A proposal has been submitted to the St. Louis, Mo., Aldermanic Board for the operation of a municipally owned bus transportation system to replace street cars. This plan calls for the ultimate purchase of a mammoth fleet of buses and the creation of a non-political transportation board to operate the service. Fares will be graduated from five

Model 19  
Twin  
Coach  
Type of  
Bus  
Serving  
San Antonio



# RECONSTRUCTION BY DIRECT ACTION

By

**George Paul Torrence**  
President, Link-Belt Company  
Chicago, Ill.

**B**USINESS includes agriculture, mining, manufacture, wholesale and retail distribution: all the steps in getting raw materials as they come from the farm, forest, or the ground, into the hands of the consumer.

Agriculture in various forms is the largest business group of the country. The time has come when the rest of the people can no longer support it, and it must stand on its own feet. Agriculture is difficult to control. The farmer has enjoyed liberty of action since the earliest days. In colonial times the farmer and his family were a self-supporting unit. If the market failed for a time, the farmer continued an independent existence. Today farming is a business largely dependent upon the sale of market crops. There is now an interdependence in the business of farming, which must be reckoned with if farming is to be a profitable enterprise.

Cooperative marketing has worked well in prosperous times, but has broken down when the excess production could not be sold. Pegging of prices by the Farm Board did not work. The farm business has been exempt from the provisions of all anti-trust acts, and yet no coöperation nor control has been more than a temporary aid, and prices are much too low.

Prices of farm products are controlled by the supply and the demand. The demand is fairly uniform, more so than in most other businesses. People must eat. Control the supply and the price will control itself. If the farmer would admit that excess capacity exists that cannot now be used, and use only the land required to fill the demand, the question would be solved. A wheat farmer is much better off getting \$1.00 a bushel from half his farm than 40 cents or less per bushel from all his farm.

Experience has proved that the farmers themselves cannot compel the reduction in acreage. A dictator is required. My suggestion is that the President appoint a dictator for each major market crop; wheat, corn, oats, and cotton.

That each dictator be given authority to limit the acreage of any crop to some fixed percentage of a five-year average for each farm. That a license to market this crop be given to a farmer only after he has conformed with the regulations. That suitable penalties be provided for anyone who buys unlicensed commodities. That in the beginning this system be confined to the basic commodities, not including livestock, on the supposition that the price of corn and oats will control the livestock prices. If the dictatorship works in these commodities, it can be extended.

This suggestion differs from the President's message to Congress on March 16. It provides a more direct control of supply without the complication of price fixing and processing taxes. The results should be the same.

Raw material industries are just as much in need of firm handling as agriculture, and properly handled, the benefit to the general public would be great. As in the case of agriculture, prices are controlled largely by the supply and the demand. Conditions differ, but the solution can be much the same if the industries are exempted from the provisions of the anti-trust acts. Despite the recent favorable decision of the Supreme Court in the Appalachian Coals sales agency case, the anti-trust acts still limit action.

The bituminous coal industry can be made a good industry for its owners and workers, and therefore for the public generally. Let Congress declare that the bituminous coal industry is exempt from the anti-trust acts, and at the same time give the Federal Trade Commission full power to pass on any rules and regulations governing the industry before they are put into effect, thus letting the Commission judge what is for the public good, as well as for the good of the industry.

The management of the mines presumably knows more about the business than any other persons. Through a Trade Association they should make the rules and appoint the dictator or director to enforce them. The Trade Association should represent at least 75 per cent of the industry. The Federal Trade Commission should hear any minority recommendations on any rules before it for approval or alteration.

Lumber needs aid as much as coal, and could be aided in the same way. Making the coal and lumber industries good industries, would have a tendency

**Essential Features of Mr. Torrence's Plan for Reconstruction, as Outlined Herewith, Present Control of Supply Without the Complication of Price Fixing and Process Taxes. Dictators Are Suggested for Agriculture and Basic Manufacturing Groups.**

to conserve the coal and lumber resources.

To conserve a national resource and avoid the waste now existing, as well as to improve the well-being of the people involved, the oil industry should also be given a chance to regulate itself legally under Federal Commission supervision, and to coordinate and improve the regulation that already exists. The only manufacturing industry that should be included at once is the steel and iron. This because it is the largest basic manufacturing industry, and affects a large number of other industries using steel and iron.

Sound handling of these industries would compel adjustments in the lives of individuals, but these adjustments made wisely and in friendly fashion would be vastly better than the continuing distress caused by false hopes that excess capacity will be required in the near future.

In the meantime, much can be done in other industries, and in retail and wholesale distribution, provided the members of these groups face the facts. First, there is no such thing as an unlimited market, at least not now. Second, capacity in excess of probable demands is a loss, and should be so considered. Third, it is unsocial as well as unprofitable to operate a business at a loss. Fourth, volume at ruinous prices is suicide. Fifth, new products, opening new markets at profitable prices, is the only wise way to utilize excess capacity. Sixth, it is possible to operate at half capacity or less and still make a profit. Seventh, industry and business are social enterprises to be operated for the mutual benefit of the owners, the workers, and the public.

The establishment of industry dictators is a partial revival of the powers of the War Industries Board, in the Federal Trade Commission or other authority; this time to limit production and raise prices. The emergency is just as great as in 1917, and just as definitely calls for prompt direct action, with the President in executive control.



# \$29,000,000 OF NEW INDUSTRIES

By

**Mark Fenton**

General Industrial Agent  
Illinois Central System

**N**EW industrial enterprises established along the lines of the Illinois Central System during the past four years (1929-1932), numbered 624. The capital invested in these new industries is estimated to have been about \$29,000,000 which is a decrease of less than eight per cent from the amount invested in new enterprises in the same territory in the more prosperous four-year period, 1925 to 1928, inclusive.

The Illinois Central decided about four years ago to broaden and strengthen its policy of furthering the industrial and agricultural development of its territory. Accordingly, each division of its development work was delegated to a specialist. A completely new industrial department was inaugurated, and a comprehensive industrial survey of its territory was made.

That the railroad's policy was conducive of gratifying results is evidenced by the continued investment of capital in new enterprises along its lines, despite the general depressed condition of business.

The 624 new industries, many of which started operations in the past three

years, embrace a wide diversification of products, and this diversification illustrates forcibly the continued faith of capital and industrial management in the resources and future of the Mississippi Valley. In 1932 the list of commodities produced and marketed by new concerns in Illinois Central territory included the following:

Furniture; furniture stock; lumber; boxes; staves; handles; coal and coke; petroleum products; grain; marble monuments; gloves; cider; groceries; tobacco; printer's ink; rice; sand, gravel and other building materials; crushed stone; asphalt; paints; roofing materials; flour; feed; fertilizers; crockery; glassware; tractors; naval stores; canned goods; cotton; cotton piece goods; and garments.

A tendency is noticed of certain classes of industry to give consideration to Southern locations as a group. One of these classes which seems exceedingly well fitted for manufacturing in the South is the textile group, and recently there has been a decided interest in Southern branch plant location by garment and hosiery manufacturers.

Toward the end of 1932 two large manufacturers of cotton shirts, dresses and pajamas located plants on the Illinois Central System south of the Ohio River. These two concerns, within the space of a week, both definitely decided on Southern locations, the Reliance Manufacturing Company going to Columbia, Miss., and the Worthy Manufacturing Company to Paducah, Ky. Such plants as these are especially welcome in any community because of their large pay-

rolls; the two plants mentioned will employ, in the aggregate, approximately 1500 hands. It is hoped that the location of these two industries will further stimulate the interest of other garment manufacturers in Southern territory.

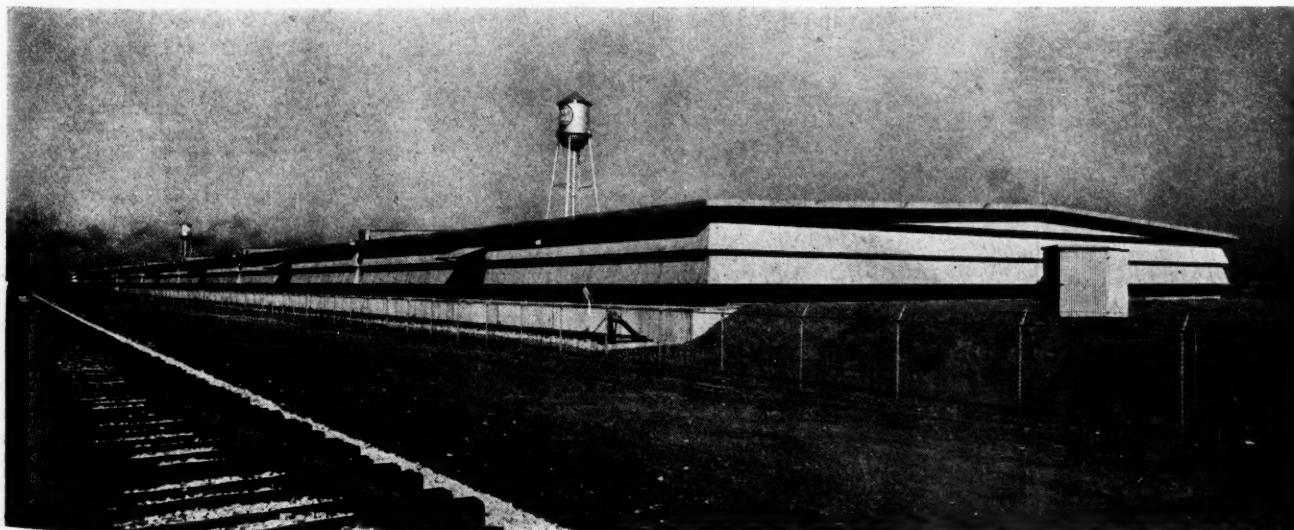
Hosiery manufacturers, also, are realizing the advantages of the South and when finally convinced of the large market extent in Southern territory, the proximity of raw materials becomes a factor not easily overlooked in deciding upon a location for a branch plant.

At first glance, it might seem that a depression in business activity would cause a corresponding, or possibly even greater, retardation of activity in plant location. It is quite evident that this result does not necessarily follow, and a little reflection will explain why this is so. Prices today are, of course, far under those of normal times, including those of real estate, building materials, labor, and other factors entering into the establishment of new enterprises. Firms fortunate enough to have available cash surpluses, or able to arrange sufficient credit, appreciate this buyer's market, and the far-seeing manufacturer is preparing for better times by taking advantage of the current opportunity to obtain industrial sites at advantageous prices, and to construct new plants at low costs for both materials and labor.

The depression has made industrial management generally more conscious of the absolute necessity for reducing production and distribution costs to a minimum in order to meet present-day competition, and the factor of most importance in effecting such reduction of operating costs is proper plant location.

**\$500,000 Tobacco Warehouse at Louisville, Ky., for the American Suppliers, Inc.**

The building of this warehouse involved one of the largest roofing contracts ever let in the South



# MODERNIZES POWER PLANT

**A** PRACTICALLY continuous power plant improvement program has been under way at the Parkersburg, W. Va., plant of the Viscose Company. The original steam power equipment was installed about six years ago. It consisted primarily of four 1000 horsepower cross drum boilers designed for 275 pound 150 degrees superheat, and fired by underfeed stokers. About three years ago, in order to take advantage of low priced fuel from West Virginia mines, and to completely modernize the steam generating equipment, a new pulverized coal burning boiler was installed utilizing the bin system of pulverization. In 1932, a second similar unit was installed together with additional pulverizing equipment. The stoker fired units were made available for standby service.

The new boilers are Walsh & Weidner sectional header type, 10,144 square feet heating surface, generating a maximum of 120,000 pounds steam per hour at 260 pounds per square inch pressure, 175 degree superheat, with feed water at 218 degrees. The boilers are equipped with Combustion Engineering Company water screens, Foster superheater and Diamond soot blowers. The first unit was equipped

with a Foster Wheeler air heater and a Foster Wheeler economizer. The second unit was equipped with Combustion Engineering split type air preheater 12,400 square feet plate area, and no economizer.

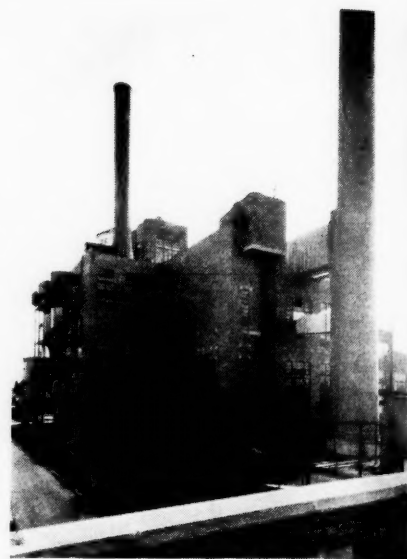
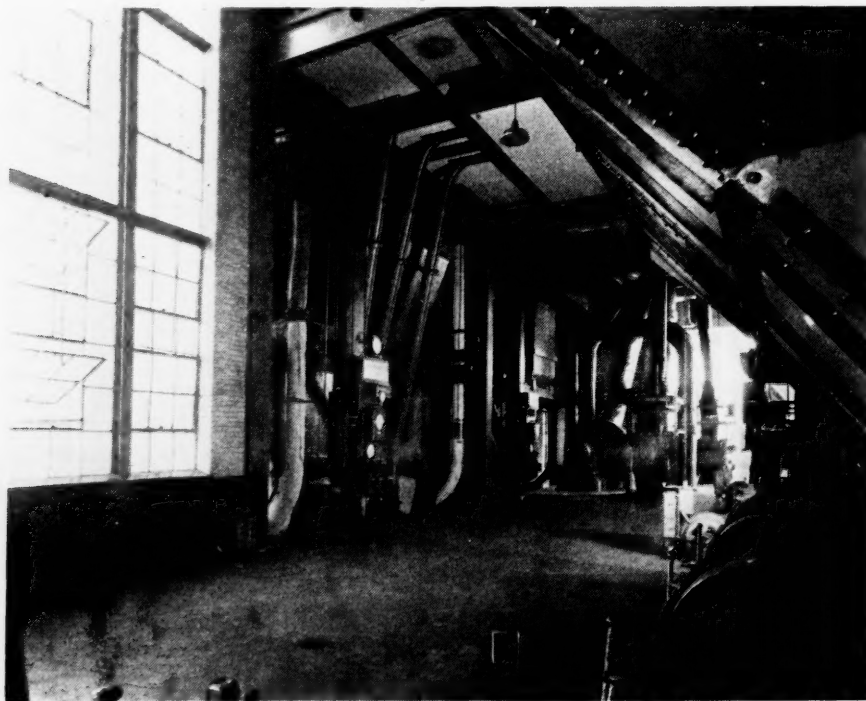
The pulverizing equipment is the Combustion Engineering Sopolco system using two 15-ton Raymond roller mills and type "R" adjustable burners. The boilers and pulverizing plant were installed by the Combustion Engineering Co.

The furnace bottoms were installed by the Allen Sherman Hoff Co., and ash is handled by the Hydrojet system.

The mechanical draft equipment on the new unit was furnished by the Buffalo Forge Co., consisting of one No. 5½ D. W. D. I. Super Turbo Concoidal Heavy Duty type forced draft fan handling a maximum of 40,000 C.F.M. at 8.3 inches s.p., 1735 R.P.M., and one No. 8 D.W. D.I. Super Triplex Heavy Duty type induced draft fans delivering 65,000 C.F.M. at 7 inches s.p., 1142 R.P.M. The fans are powered by Crocker Wheeler variable speed motors.

An interesting feature of the plant was the installation of two No. 60 type

**Interior of the Boiler House of the Viscose Company at Parkersburg, W. Va., in Which New Boiler Plant Using Pulverized Coal Burning Equipment and Modern Ash Handling System Has Been Installed**



**Parkersburg, W. Va., Power Plant of the Viscose Company Which Has Been Continuously Improved Since It Was Built Six Years Ago**

"D" American Blower Co. fly ash collectors. These collectors were installed on the existing pulverized coal burning unit and on the new unit, arranged for the removal of dust and fly ash before entering the induced draft fans. The annoyance of cinder in the vicinity of the plant has been entirely eliminated and the operation of these collectors has been particularly satisfactory.

The raw coal is automatically weighed before delivery to the pulverizer by Richardson Apron Feed type coal scales of 400 pound capacity, hourly capacity 15-18 tons.

Additional equipment and appurtenances in the new addition to the plant are as follows:

- Copes feed water regulator—4 inch.
- Republic CO<sub>2</sub> meter.
- Ellison draft gauge.
- Bailey steam-air flow meter.
- Yarnall-Waring sight water column.
- Magnetic Mfg. Co. magnetic pulley (coal).
- Connery & Co. air and gas ducts.
- Piping—B. F. Shaw Co.

The Viscose Company installed all electrical equipment, fans, scales and all necessary building alterations and additions.

The installation of the pulverized coal ducts and cyclone collector presented a problem in that the space allotted to the original pulverizing plant was utilized to install the new apparatus. Ducts and equipment were moved without interfering with the plant operation.

The new equipment was installed in accordance with drawings and specifications prepared by The Ballinger Company, architects and engineers, Philadelphia and New York, and under their supervision.



# BARKSDALE FIELD, LOUISIANA

**T**HE City of Shreveport, Louisiana, donated to the U. S. Government 23,000 acres of land, three and one-half miles from Shreveport, for the site of Barksdale Field and U. S. Air Post link in the chain of National Defense. The Reservation is the largest in the world, being nine miles long and four and one-half miles wide. It is divided into a bombing range, machine gun range, flying field and housing area.

Barksdale Field is to be the home of the Third Attack Wing of the U. S. Air Corps, which consists of Wing Headquarters, Pursuit Group, Attack Group, Air Corps Troops, and detachments of Medical Corps, Quartermaster Corps, Signal Corps, Finance and Ordnance, making a personnel of 2000 officers and men.

Work completed, and that now under construction has cost approximately \$4,500,000.

The first contract was let early in 1931 for the clearing and preparation of the landing field. The construction of this project has been completed with an elaborate drainage system installed, so that the flying field will be serviceable in all kinds of weather.

## Buildings Completed

Building construction was started early in 1931 and has been going on con-

tinuously for the past two years. The following projects are now completed:

Four Air Corps Double Hangars, One Wing Operations Building, Air Corps Warehouse, Air Corps Shops, Q. M. Warehouse, Q. M. Shops, Q. M. Garage, Photographic Laboratory, Parachute Building, Radio Building, Paint Oil and Dope House, Post Exchange, Four Air Corps Barracks, Fire Station and Guardhouse, Gymnasium, Incinerator, Headquarters Building, Forty-Two Company Officers' Quarters, Sixty-Eight Non-Commissioned Officers' Quarters.

## Utilities Installed

The utilities and other projects completed are:

Gasoline and oil storage system, paved streets and sidewalks, water power, underground telephone system, underground electric, gas and water systems, street lighting system, sanitary sewer and storm sewer systems, landing field night lighting system and main entrance buildings.

## Work in Progress

Work now under contract and in progress of construction:

Two barracks, hospital, nine Field Officers' quarters, twenty Company Officers' quarters, and fifteen double Non-Commissioned Officers' quarters, an addition to Q. M. Garage. The bulk of this work

will be completed about November this year.

Funds are available for the construction, this year, of the Commanding Officer's home and the bachelor Officers' quarters. Plans and specifications for this work are now being prepared in Washington.

## Type of Construction

Buildings constructed at Barksdale Field Post are of the French Colonial Design. All the larger buildings, such as barracks, hospital, etc., are reinforced concrete, curtain walled with tile and stuccoed. The homes for Commissioned Officers, and Non-Commissioned Officers are all semi-fireproof construction with the exterior walls stuccoed and with hip roofs covered with tile.

Development of the project is under the direction of the Construction Division of the Quartermaster Corps of the War Department. The construction work at Barksdale Field is under the direct supervision of Captain George E. Lamb, Constructing Quartermaster.

Barksdale Field was named in honor of the late Eugene Hoy Barksdale, United States Army, a Mississippian, who was accredited with three aerial victories during the World War. He was killed while in service of the U. S. Air Corps, while testing the spinning qualities of a plane in 1926.

With the removal of the 20th Pursuit Group to Barksdale Field from Mather Field, California, in October 1932, which group consisted of a personnel of 250 officers and men, the Post became a link in the U. S. Chain of Air Defense.

**\$4,500,000 Construction Program Nearing Completion at Largest Air Post Reservation in the World**

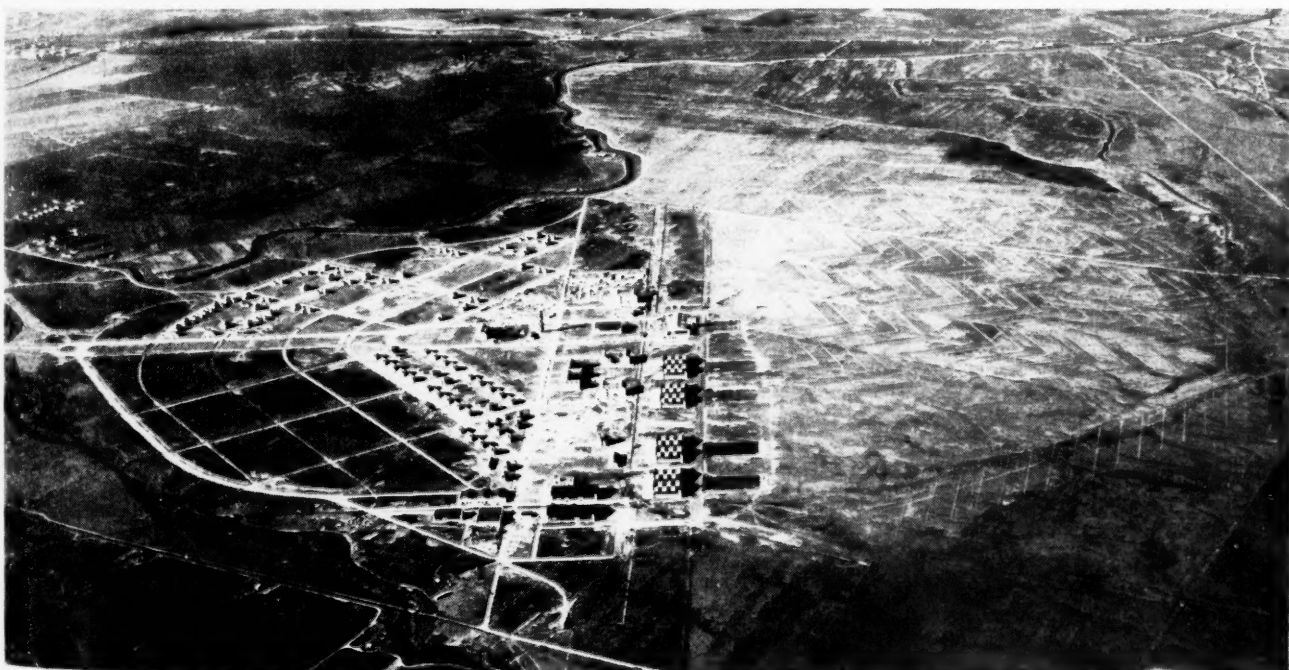


Photo by Fourth Photo Section, Air Corps



# "TRASHY" ARCHITECTURE—

## THE MENACE TO THE BUILDING INDUSTRY

By

**William D. Sawler**

Morgan Woodwork Organization  
Chicago, Ill.

**I**T is apparent that in the past many have been guilty, unintentionally it is true, of menacing the home construction industry by building or encouraging the building of homes of nondescript architecture. The hundreds of thousands of misfit residences standing today are doing more harm in destroying home owning desire than possibly any other single factor.

They are demoralizing the natural urge of every red blooded American to own his own home. The blight of their crude appearance is spreading to affect seriously the very industry which brought them into being.

When we realize the enormity of their offense to the industry we begin to appreciate the damage done. Strangely enough there is no sane reason why these houses should have been built with so little regard for good design. These ugly, unwarranted mongrels, with values made unstable by rapid depreciation, in most cases actually cost more than the homes of correct architecture.

Well designed homes are worthy additions to any community, a real delight to their owners and a tangible asset of good will to those who build them. The appeal of such homes lasts as long as the homes themselves and thus they always command a high resale value. They will always be in good taste, for their beauty is based not on a mere whim or fad, but on the sound fundamentals of all art.

This is always true of any work of art. The crumbling temples of Greece

evoke more sincere praise by their beauty even in decay than most of the newest buildings of our present era. Even in our own country many homes built in Revolutionary days still stand, to shame by their dignity—their simple beauty and harmony of detail most of the dwellings built in these years of "progress and advancement".

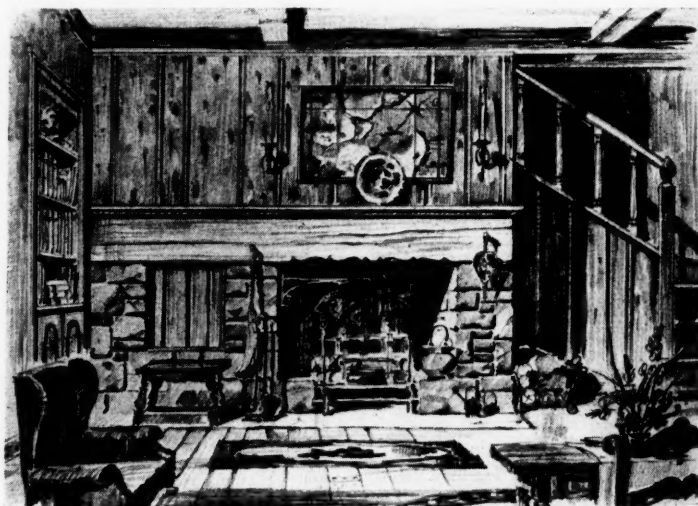
One of the greatest needs of the industry today is a radical improvement in the architecture of the homes it offers the public. Over three years ago many in the architectural profession suddenly realized their duty to the industry and began to extend their services more liberally to the creation of better small home design. Many groups of prominent architects now are serving builders, lumber dealers and others in the industry with plans for small homes that are an inspiration to home ownership.

Builders have come to recognize that their part in the picture is that of building and are specializing more thoroughly on improved construction, leaving the architecture more and more to the architect who is best qualified to produce it.

**Destroying Desire  
for Home Ownership  
Among the Nation's  
Home Seekers—  
Dwellings of Misfit  
Design Seriously Af-  
fect the Sales of  
Homes — Attractive,  
Well Planned, Cor-  
rectly Designed and  
Constructed Dwell-  
ings Create Desire  
for Home Ownership.**

This is certain to make a vast improvement throughout the industry.

Having considered design, the next factor of importance is correct materials. Every home to be a complete ensemble, in good taste throughout, must be built



An  
Appropriate  
Interior  
for the  
English  
House



Hodge-podge In-  
terior of Misfit  
Design Lacking  
Architectural Unity  
—AVOID THIS

of the proper materials—roof, hardware, flooring, exterior and interior woodwork, etc. When every contributing factor is in harmony the complete result cannot help but be harmonious—in good taste.

The two homes shown on this and the opposite page are visual proof of the comparison between the so-called mongrel and the house in good taste. The one marked "Obsolete" is all of that. Comparatively new, it is as out-of-date as yesterday's newspaper, and is a drug on the market. Notice the conflicting

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elements in its exterior design. The result is a home that produces most distressing impression. The average layman, untrained in architecture senses the deficiencies of this house although he may not be able definitely to put his finger on any fundamental reason for its lack of appeal.

Now consider the other house. What a contrast! Here is a house in which the distinguishing elements of real English architecture have been carried through faithfully. Note especially how all materials are united to form an interesting composition. The woodwork is true-to-type, the roof correct, in fact all exterior units are in perfect harmony. Today such a home actually costs less to build than the misfit, although their cubical content is practically alike.

The comparison may be carried even further to the interiors of these homes. Notice the hodge-podge interior of the mongrel as compared with the charming interior of the correctly designed home. Which should be the easiest to sell and which would be the one to encourage others to own their own homes? The answer is obvious.

This is typical of what we must build to reawaken home desire in the hearts of the American people. Then we will sell more homes and gradually breathe new life into the sleeping giant—the Building Industry. We must stop the building of mongrels and encourage correct architecture wherever possible. Only as we do this can we hope to regain the success that our industry so long enjoyed.

Let us commit ourselves now to the task of giving our fellow citizens homes

they may be proud of not only for the first few years while the charm of newness is still upon them, but for the long years to come. It will be good for us all.

**The architecturally correct home must have unity and harmony throughout. Both interior and exterior. Not one detail can be overlooked lest it ruin an otherwise perfect ensemble.**

The desire for homes, like the desire for any article of merchandise must be stimulated and encouraged continuously. In this way it is developed from "potential" into the act of buying which, after all, is the result the seller so earnestly

seeks in supplying high quality products.

If that desire is to be satisfied it must culminate in the actual purchase. Before this happens there must be developed a powerful determination on the part of the individual actually to own a home. He visits the attractive, well planned homes of his friends, he pictures his family in a similar home and then desire takes root. If it is fostered and encouraged properly this individual soon becomes a good prospect—then a home owner. On the other hand, if he sees about him an endless variety of mongrels—nondescripts—homes lacking in beauty and individuality, the desire may not even get a good start.

Typical "Nondescript" Misnamed "English"—an Example of What Not to Build





New Home of the  
Springfield Safe  
Deposit and Trust  
Company

# MODERN BANKING FACILITIES



**T**O afford scope for increasing operations and to give visible expression to the important place which the institution occupies in the financial affairs of Springfield, Mass., and throughout New England, the Springfield Safe Deposit and Trust Company will shortly move into its new home, the construction of which is practically completed. The most careful thought on the part of the architects, the Thomas M. James Company of Boston, and the officers of the bank has been given to every detail with the result that both the design and construction of the new home embody unusual features.

Officers' Quarters are located on the first floor with several conference rooms adjoining. On the upper floors there has been provided a lunch room for employees, kitchen, rest rooms and lockers, while the fourth floor has been specially arranged and equipped for the use of the important Trust Department of this bank.

The substantial resources of this bank together with the large holdings of the Trust Department have been responsible for the most careful consideration being given to the design and construction of the vault equipment. Moreover, for years this bank has conducted a large safe deposit business and the new vault has provision for over 8000 boxes.

The Safe Deposit Vault and Security Vault are located in the basement. Entrances are protected by three vault doors of the YORK design, each 20 inches

in net solid thickness, rectangular in form, each ponderous piece of solid steel construction is supported on a heavy cast crane hinge with especially designed ball and roller bearings. Engineering ability and mechanical skill have resulted in such perfect adjustment and balance that a child can swing a door open and shut. The frame surrounding the door is also of solid steel construction matching the thickness of the door itself. Into each of these massive entrances have been incorporated protection against every known form of burglarious attack. In particular, each door and frame contains a substantial thickness of "INFUSITE," a special metal created by York to combat attack by the oxy-acetylene torch.

The locking device and mechanism for forcing each great door

Massive Door  
Construction  
of the Main  
Entrance  
to Vault

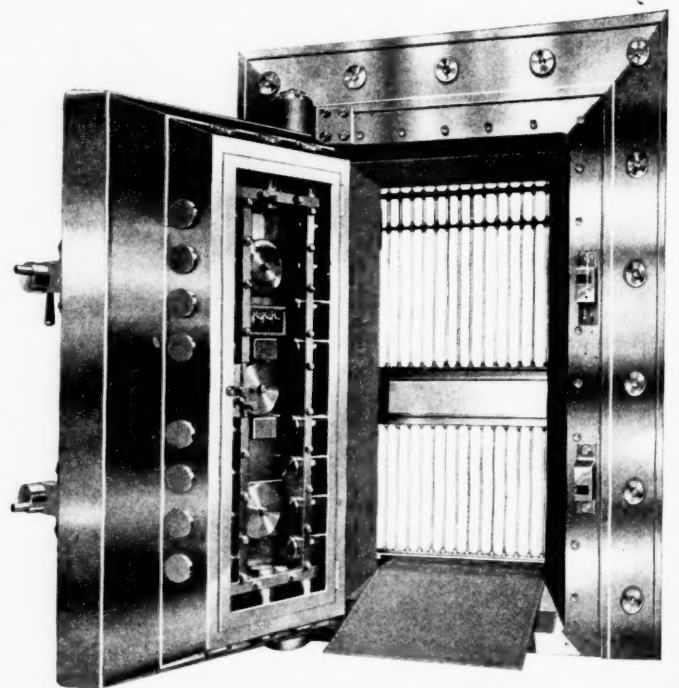
firmly into the jambs are further examples of mechanical skill and ingenuity by which the massiveness of the door is made effective.

Twenty-two heavy steel locking bolts fitted in two lines of steel frames are used to lock the door. These bolts are locked or unlocked by a large hand wheel on the outside of the door. The bolts are held in locked position by two modern combination locks so arranged that either or both may be required to control the bolts. To further guard the vault the unlocking of the door is made dependent upon the operation of a quadruple timelock. This device embodies four separate and independent heavy type movements which can be set to run from 1 to 72 hours. Any one of the four movements is sufficient to accomplish the purpose of the lock, the other three acting as reserves.

Plate glass doors in beautifully polished steel frames with locks enclose the entire locking mechanisms to guard its bearings and delicate parts from impairment by the friction or cut of dust and grit. The finish of the doors and all its parts is in keeping with its marvelous and intricate mechanism. All the metals exposed to view are left in natural color beautifully polished with an even grain to prevent rust. The pressure system is heavily nickel plated. The great crane hinges are drawer-fitted, and finished in polished steel.

Beautiful steel grilles guard the approach to these vault entrances, and additional steel grilles sub-divide the interior of the vaults.

In keeping with modern practices the bank has installed a York Night Depository, thus giving to its many patrons the facilities of day and night service.



MANUFACTURERS RECORD FOR



# A CITY REDUCES EXPENSES

By  
**Paul Morton**  
City Manager

**L**EXINGTON, Ky., has a population of 45,736, as of the United States census of 1930. In the past two years it has reduced taxes, effected economies, paid its debts, increased efficiency of city departments and improved service. Although 1932 was a year of declining revenues and heavy demands for relief purposes, Lexington, operating under a new Commission—City Manager administration, entered 1933 with the first cash balance in the general fund, for operating purposes, reported by the city since 1915. This balance of \$11,613 was not a mere "book entry." The city finished the year 1932 with all sinking funds adequately provided for and all debts paid.

Since the close of 1931 the tax rate has been lowered from \$2.62 to \$2.34 per hundred dollars of assessed valuation. This rate reduction has been accompanied by a reduction, in the assessed value of real and personal property, of \$2,987,179 to the 1933 figure of \$50,276,896 within the same period.

The affairs of the public schools are controlled, separately from those of the city government, by the Board of Education. Of the \$2.34 tax rate in 1933 the schools receive 78 cents, a reduction of two cents from the preceding year.

The budget adopted by the city government on March 1, 1933, calls for estimated expenditures of \$1,034,607 and represents a reduction of \$216,313 from actual 1931 budget expenditures. In 1932 budget expenditures were curtailed \$65,690 below the estimated figure.

This financial record has been made possible by readjustments and economies in virtually every department of the city government. Finances, however, do not present the whole picture. Along with tax reductions and economies many improvements have been made in the services rendered to citizens.



Business District of Lexington, Ky.

At the beginning of the City Manager administration, the City Commissioners ordered a detailed audit, by certified public accountants, of all city affairs for the preceding two years.

Under the new system of accounting the City Manager receives daily reports of the city's financial condition and monthly reports show the budget expenditures of each city department for services, materials and supplies.

The effectiveness of the city's police protection has been materially improved by installing a radio system at a cost of \$11,500. Radio equipment permitted the reorganization of the police department on the three platoon basis with patrolmen working in shifts of eight instead of twelve hours.

A system of centralized purchasing was inaugurated early in 1932 and the method of making all city purchases through the office of the purchasing agent instead of through several separate departments has proven effective. Through exacting requirements of requisitions, purchase orders and receipts for services, materials and supplies, additional safeguards have been placed around the spending of city funds.

While the largest reduction of operating costs of any city department was made, last year, in the Department of Public Works, operations were kept at a normal level. Naturally the declining prices of materials and supplies contributed to these reductions. However, the installation of a standard cost accounting and work record system aided materially in the curtailment.

The Public Works Department early in 1932 took over the work of trash and

garbage collection, formerly handled on private contract at a cost of \$12,000. Although trash collections increased at least 50 per cent during the year, the following of carefully planned schedules and routes resulted in improved service and a saving in cost of \$3536 compared to 1931.

Through a street lighting survey a substantial cut in costs was made possible and this reduction will be materially increased in the current year.

In August, 1932, a new central repair garage for city owned motor equipment was placed in service. The new building and equipment cost \$16,391 but is rapidly paying for itself in savings made through eliminating scattered shops in the various city departments. Payment for the garage was made from the 1932 budget. In 1933 the offices, garage and storeroom at the city plant are being operated as a separate new department, the Department of Maintenance and Supply. This department has permitted savings from quantity purchases and allows businesslike handling of city supplies. City motor equipment is now subject to regular inspection and adjustment which greatly reduces the time lost through units being laid up for repairs.

The addition of a new \$6000 motor sweeper to the city's street cleaning equipment now allows the cleaning of all paved streets in Lexington twice each week and the central business district daily.

Curtalement of expenses has not prevented either necessary replacements of equipment or the maintenance of public property in good condition.

# HANDLING COAL IN THE MODERATE-SIZED POWER PLANT

**T**HE handling of coal in the medium sized plant always presents a problem to the engineer designing the power house. Does the amount of coal burned per day justify full automatic handling equipment? If only a moderate amount of coal is to be handled, is it necessary to go to the expense of track hopper, skip hoist, coal bunker and weigh larry? On the other hand, coal cannot be fed to stokers suitably by the old fashioned method of wheel barrow and shovel. Most stoker hoppers are too high from the floor to be reached by a shovel without scattering coal all over the place and, besides, it is slow and expensive. For the moderate sized plant, the designing engineer seeks a middle course.

The Cleveland Tramrail Division of the Cleveland Crane & Engineering Company at Wickliffe, Ohio, has made a specialty of coal handling for these medium sized power plants and their equipment is especially designed to have the first cost of the coal handling equipment in keeping with the size of plant and the operating cost correspondingly low.

If it is possible to arrange for the coal to arrive at the power plant on elevated tracks higher than the boiler room floor, then ground storage for the coal will be obtained without the need of handling machinery at this point. Specially designed chute buckets on wheels are filled at the coal pile by hand shoveling. These buckets have a capacity of 600 to 1000 pounds of coal and are easily pushed by hand due to the large ball-bearing wheels which move easily over a concrete runway to boiler room door. At this point, the bucket is hooked onto the hoist of the overhead Tramrail and conveyed to the proper position over any of the stoker hoppers. A slight pull on the bucket lever allows the coal to chute into the hopper without any being spilled outside. The flow of coal may be checked when desired or the full contents of the bucket may be delivered to any hopper. Scales may be furnished in the overhead track so that accurate weight records may be kept without time being taken to lower the bucket for weighing.

The bucket may be hoisted and propelled along the overhead track either by

hand or electricity. When the stoker hoppers are high above the boiler room floor, the distance of travel great or the movement especially active, the electrically propelled unit is preferable, but there are numerous successful installations working entirely by hand power.

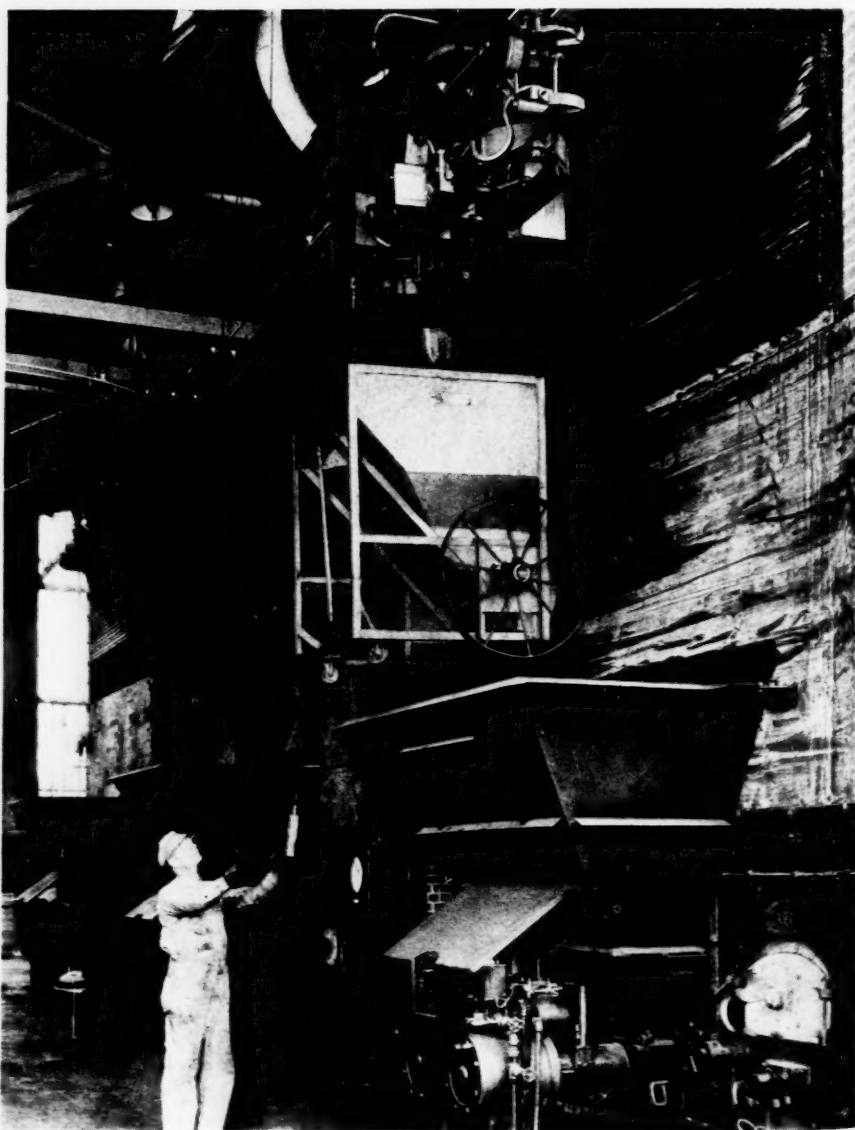
Recently, a Cleveland tramrail system with electric hoist, electrically propelled along the track, was installed in the modern power house of a State institution, and the cost was only \$2500. There are three boilers, two 480 horse power and one 380 horse power, with modern stokers, as shown in the accompanying illustration. In this case, it was desirable to furnish occupation for some of the inmates and the filling of the buckets

by hand shoveling was an advantage. When the boilers are running full capacity, two buckets are used, one being filled while the other is being conveyed to the boilers.

Hand shoveling of coal into the buckets can be eliminated by employing elevated storage bins so the coal will flow by gravity. This method does not require a bucket with large wheels for rolling over the floor.

Boiler Plant of the Spring Grove State Hospital, Catonsville, Md.

Coal bucket suspended from Tramrail and ready for dumping contents into the stoker hopper



# THE NEED FOR LIFE INSURANCE HAS GROWN GREATER TODAY

By

**William B. Bailey**

Economist,  
The Travelers Insurance  
Company

"**W**HEN my husband was alive, I used to tell him that he was a fool to spend so much of his money on life insurance," confessed a woman who has been a widow for a little over a year. "But now that I can appreciate how much that life insurance of his has spared me, I wish I could take back every word of objection I uttered against it."

"I used to think we didn't need life insurance. I thought we were comfortably well off. I looked upon the money put into life insurance as so much less to spend for other things. We may have been comfortably well off at one time; but I certainly wouldn't be today, if it were not for that life insurance. Our securities are worth about a fifth of what I thought they were worth. And as for our house, it is worth less than the mortgages on it. I don't know what I would have done, if my husband had not bought that life insurance. I would have had hard work to find a job today."

This woman summed up, in a few words, the reasons why the need for life insurance is greater today than ever before. If a man died in November, 1928, it is very probable that he would have left some security holdings which could be readily marketed at a high price. It is quite likely that he would have left an equity on his home that could be readily realized. Even if he did not leave either of these, it would not have been a very difficult matter then for his wife to have found a job, which would have provided for herself and the children; or if not that, she probably had a number of relatives who could well afford to take her in.

But suppose a man drops out of the picture today with little or no life insurance, what does he leave? Any security holdings which he may have are likely to have shrunk to a third or a fifth of what they were worth in 1928.

If he was a home owner, it is quite probable that the mortgage overshadows his equity and little, if any, cash would remain if the home were sold.

During the past two or three years, a large volume of life insurance has been bought for investment purposes. This is not surprising in view of the fact that life insurance is one of the very few investments which has remained at par during the troublous years which we have been experiencing. Many men are wanting security, the feeling of solid ground beneath their feet and freedom from disturbing and perplexing worries. These are the priceless assurances which are wrapped up in the folds and written between the lines of an investment life insurance contract.

These investment-life contracts provide, we'll say, \$25,000 life insurance until a man reaches 55, 60 or 65—and then pay him an income of \$250 a month for as long as he lives. They can be written to assure an income of any amount ranging from \$10 to \$1000 a month. Some provide \$20 a month in retirement income for each \$1000 life insurance. Others provide larger amounts of life insurance and lesser amounts of retirement income. Some, such as the various forms of annuities, provide retirement income without any life insurance in combination. As a matter of fact, there are many possible combinations of life insurance and retirement income available today.

As the value of securities and real estate has shrunk and as the opportunities for finding employment have narrowed, the need for life insurance has grown until it is safe to say that never before in the history of our country has that need been greater than it is today. Many of the old landmarks have been washed away by the series of economic storms through which we have been traveling. However, there is one towering landmark which has not budged amidst the stress and turmoil. It has stood as firm and solid as the continent itself. It is life insurance, and it has been a source of comfort to millions of men by assuring them that here is something solid against which either they or their families can lean at a time when other values seem ephemeral.

Just as after three long years of war, all the soldiers of all the armies which had been in action since 1914 were eagerly looking forward to the time when they

**Life Insurance Has Stood Like a Rock Amidst Shifting Sands During the Past Three Years—It Has Met Its Expected Obligations Without Hesitancy or Delay—It Has Withstood a Sweeping Tide of Abnormal Demands Created by Abnormal Business Conditions**

could leave the shell fire and gas, the mud and the vermin of the trenches and go back in peace to their homes; so after three years of extraordinary business stress and worry many business men are eagerly looking forward to the time when they can shut up all their worries in their desks for the last time and retire to some more peaceful place or avocation. Unfortunately for many of them, the same factors which have so added to their business worries have also undermined the plans or programs which they had hoped would provide for their retirement years. Now they must build new plans and because time is fleeting, they know that they cannot afford to take any chances.

Life insurance has stood like a rock amidst shifting sands during the past three years. Not only has it met its expected obligations dollar for dollar without hesitancy or delay, but also it has withstood a sweeping tide of abnormal demands created by the abnormal business conditions. Many business men who once considered life insurance too conservative, too safe, too slow for them are now turning to it with a great sigh of relief.

"Here is something that is as dependable as an old friend," they feel. "Something which will be there when it is needed. It does not promise to make me a millionaire, but it will assure me those simple comforts, without which life is so drab and often so tragical for an old man."



# \$65,559,000 CONTRACTS AWARDED IN FIRST QUARTER

**C**ONTRACTS awarded for building, engineering and construction projects in the sixteen Southern States in the first three months of 1933 amounted to \$65,559,000, as compared with \$62,970,000 reported for the corresponding period of 1932. March lettings announced by the MANUFACTURERS RECORD DAILY CONSTRUCTION BULLETIN, totaled \$18,697,000, as compared with awards of \$27,390,000 in February, and with \$19,472,000 in January.

## Road and Street Work

Road, street and paving work hold first place in the first quarter's contracts totaling \$23,534,000, including awards of \$8,071,000 in January, \$8,751,000 in February, and \$6,712,000 in March. A number of legislatures now in session will consider appropriations necessary for carrying on road construction and maintenance. Meanwhile, the States are going forward with 1933 road work on the basis of utilizing gasoline tax funds and motor vehicle license fees. States are now concentrating their attention on other than primary roads. Particular attention is being given to the maintenance of existing State and secondary systems with a view to providing, insofar as is practicable, labor for rural residents. Various counties are undertaking highway work on an ambitious scale, necessitating the purchase of road-building and maintenance equipment, as well as a variety of materials.

## Public Buildings

Construction of public buildings is second in importance only to road, street and paving work, such contracts aggregating \$19,202,000, January to March inclusive, made up of \$5,804,000 in awards in January, \$8,341,000 in February, and \$5,057,000 in March. The monthly totals so far this year are small compared with the figures in some recent months when Federal building work was at its height.

Awards for industrial and engineering projects in the South included a wide variety of jobs, such as industrial plants, filling stations and garages, levees and dikes, sewers and water works, dredging and miscellaneous enterprises. In the aggregate, they account for \$18,694,000 or nearly 29 per cent of the awards in the first three months of 1933. In Janu-

ary, contracts for industrial and engineering projects amounted to \$4,382,000, increasing sharply to \$9,001,000 in February, and declining to \$5,203,000 in March.

## Sewer and Water Works

Awards for sewers, drainage and water works amounted to \$3,085,000 in the first quarter. The total of \$1,793,000 in March, features the engineering projects' lettings. Not in many months has so large an expenditure been involved in jobs of this character. The result was made possible through the granting of numerous loans to cities and towns by the Reconstruction Finance Corporation and the initiation of projects long planned, but held in abeyance until recently.

## New Industrial Plants

Contracts for Southern industrial plants in the first three months of this year totaled \$7,889,000, which included awards of \$1,277,000 in January, \$4,865,000 in February, and \$1,747,000 in March. Included in the list of new industrial enterprises put under way in March are several oil refinery extensions, textile mill improvements, a button factory, ice and cold storage plants, canning and packing plants, a creamery, a foundry, etc.

Awards for general building projects, including apartment houses and hotels, association and fraternal structures, bank and office buildings, churches, dwellings and stores, totaled \$4,129,000 in the first quarter of this year. Dwelling awards of \$1,848,000 feature this class of construction. In the first month of the year dwelling contracts let totaled \$500,000, declining slightly to \$477,000 in February, and increasing sharply to \$871,000 in March. The increase in residential building is distinctly encouraging, since it is this class of work that has thus far shown but slight evidence of an upward trend. In fact, general building contracts have shown a progressive increase each month this year. January awards were but \$1,215,000, whereas in February they were \$1,279,000 and the March lettings were \$1,635,000.

## Contracts to Be Awarded

Projected industrial and engineering construction, amounting to \$15,755,000, held first place in March, with proposed public buildings second, amounting to

\$10,198,000. Road, street and paving work, with a total of \$8,461,000, is third, and projected building work of \$3,752,000 is fourth.

The strictly industrial construction of \$7,359,000 proposed and planned in March indicates an encouraging volume of industrial development is in sight in the South. Among the projects of this type are improvements to several oil refineries, an addition to a grain elevator, several breweries, two oil pipe lines, and an array of small industrial plants to turn out a varied assortment of products.

## CONSTRUCTION ACTIVITY FOR MARCH, 1933

	Contracts Awarded	Contracts to be Awarded
<b>General Building</b>		
Apartment houses and hotels .....	\$105,000	\$1,980,000
Association and fraternal .....		
Bank and office .....	113,000	400,000
Churches .....	206,000	443,000
Dwellings .....	871,000	679,000
Stores .....	340,000	250,000
	<b>\$1,635,000</b>	<b>\$3,752,000</b>
<b>Public Buildings</b>		
City, County, Govern- ment and State .....	4,653,000	8,974,000
Schools .....	404,000	1,224,000
	<b>\$5,057,000</b>	<b>\$10,198,000</b>
<b>Roads, Streets and Paving</b>	<b>\$6,712,000</b>	<b>\$8,461,000</b>
<b>Industrial and Engineering Projects</b>		
Dredging .....	702,000	1,407,000
Filling Stations, Garages, etc. ....	490,000	1,055,000
Industrial plants ....	1,747,000	7,359,000
Levees, Revetments, Dikes, etc. ....	600,000	876,000
Warehouses .....		20,000
Sewers, Drainage and Water Works .....	1,739,000	4,758,000
Miscellaneous Projects	15,000	280,000
	<b>\$5,293,000</b>	<b>\$15,755,000</b>
<b>Total .....</b>	<b>\$18,697,000</b>	<b>\$38,166,000</b>

## CONSTRUCTION ACTIVITY FOR FIRST THREE MONTHS, 1933

	Contracts Awarded	Contracts to be Awarded
<b>General Building</b>		
Apartment Houses and Hotels .....	\$465,000	\$2,773,000
Association and Fraternal .....	15,000	75,000
Bank and Office .....	433,000	1,325,000
Churches .....	521,000	1,174,000
Dwellings .....	1,848,000	1,379,000
Stores .....	847,000	790,000
	<b>\$4,129,000</b>	<b>\$7,516,000</b>
<b>Public Buildings</b>		
City, County, Govern- ment and State .....	16,777,000	22,687,000
Schools .....	2,425,000	7,018,000
	<b>\$19,202,000</b>	<b>\$29,705,000</b>
<b>Roads, Streets and paving</b>	<b>\$23,534,000</b>	<b>\$36,280,000</b>
<b>Industrial and Engineering Projects</b>		
Dredging .....	4,501,000	4,221,000
Filling Stations, garages, etc. ....	1,120,000	1,575,000
Industrial plants ....	7,889,000	44,356,000
Levees, Revetments, Dikes, etc. ....	1,928,000	2,756,000
Warehouses .....	70,000	30,000
Sewers, Drainage and Water Works .....	3,085,000	9,380,000
Miscellaneous Projects	101,000	725,000
	<b>\$18,694,000</b>	<b>\$63,043,000</b>
<b>Total .....</b>	<b>\$65,559,000</b>	<b>\$136,544,000</b>

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# GOOD ROADS AND MOTOR TRANSPORT

## NEW MOTOR TRANSPORTATION LAWS ENACTED BY VIRGINIA

The Virginia General Assembly recently passed new motor vehicle laws designed to bring order to the truck transport situation, to provide necessary revenues for highway building and maintenance, and, in a measure, to equalize the field of competition between railway and highway carriers.

One of Virginia's new laws fixes the dimensions and weights of motor truck and tractor-trailer combinations, and establishes license fees and tax rates. Other provisions relate to speed limits and to reciprocity agreements with other states. Also, contract carriers are prohibited from charging lower rates than common carriers serving the same territory. Proper accounting practices and the publication of rates and adherence thereto are provided for in another law. A revision of previous gasoline tax legislation was made with a view to stopping gasoline bootlegging.

Motor truck and tractor-trailer combinations are now restricted in length to 33 feet and 45 feet, plus couplings, respectively, as against the previous limit of 30 feet for single vehicles and 85 feet for combinations. Highway trains are limited to two vehicles, as against the combinations of three vehicles heretofore permitted. Width and height limitations are unchanged at 96 inches and 12½ feet respectively, but the permissible gross weight has been reduced from 40,000 pounds to 24,000 pounds for four-wheel vehicles, and to 35,000 pounds for six-wheel vehicles.

License fees for buses remain the same at 70 cents per 100 pounds of manufacturer's shipping weight, but the gross receipts tax on common carrier buses is increased from 1.5 per cent to 2 per cent. All trucks—common carrier, contract and private—have been assessed annual license fees ranging from a minimum of \$15 to a maximum of \$200. The new assessments for common carriers will be 70 cents per 100 pounds on weight of chassis plus manufacturers rated capacity. These common carriers, also, will pay a 2 per cent tax on gross receipts as against the 1.5 per cent tax previously in effect. Contract, or for hire trucks, other than common carriers have been paying in addition to the license fees applicable to all, a supple-

mentary tax scaled from \$10 on a one-ton truck to \$100 on a five-ton vehicle, thus making the maximum possible previous assessment on contract carriers \$300 a year. Under the new law privately operated resident trucks will pay annual license fees ranging from \$15 on a one-ton truck to \$1150 on ten-ton. Contract carriers are required to pay one and a half times these fees, so that a contract truck of ten tons capacity will pay an annual fee of \$1725.

Heretofore, a tractor with a trailer has been classed as a truck, and fees for trailers have been \$10 on the first ton of capacity plus \$3 for each one-half ton additional. The new law assesses both trailers and semi-trailers one-half the fees for trucks of like capacity, with semi-trailers and trailers operated for hire paying one and one-half times as much as like vehicles privately operated. A filing fee of \$25 must now accompany an application for a certificate of convenience and necessity, or an application to transfer such a certificate, and \$3 is charged for duplicate certificates; previously no filing fees were required.

A provision is included for reciprocity with other states in the matter of fees, but non-resident truckers, unless excused by reciprocity, will be required to pay the same fees as resident operators. Alternate taxes on a ton-mile basis are, however, provided for interstate common carriers and non-resident truckers in the event the regular levies are held constitutional as applied to such operators.

Other provisions relate to speed limits and permit the highway commission to classify certain highways and fix reduced size and weight limitations thereon.

Other laws enacted give the Virginia Corporation Commission broad powers to regulate motor carriers as to rates and practices, to enforce proper accounting practices, to require publication of rates and adherence thereto, and to remove discriminations. An Act, also, requires motor carriers to issue bills of lading and to insure against loss or injury to persons and property. Further, it prescribes the considerations which shall guide the State Commission in determining whether or not to grant a certificate, eliminating the provision of

the former law that "the existence of railroad or other common carrier in the territory sought to be served by such applicant shall not be sufficient cause for refusing," etc.

Another of the new laws is designed to prevent gasoline bootlegging as well as to prevent interstate trucks from carrying extra supply of gasoline.

The State tax code is amended to provide for the assessment and taxation of the rolling stock of common carrier, bus and truck companies. The rate is fixed at \$2.50 per \$100 of value, the proceeds to be distributed to communities on the basis of the total vehicle miles operated by each carrier in Virginia in each locality. There is finally an Act which requires the State Corporation Commission, before issuing certificates to interstate carriers permitting the use of Virginia highways, to inquire into traffic conditions on the route proposed, and to refuse such certificate if such use will unduly endanger life and property, or subject the general public to more than ordinary danger or inconvenience.

A strong influence in the passage of highway regulatory measures in Virginia have been the activities of the Railroad Employees and Tax Payers Association, Inc., of Richmond.

### Texas Truck Law Valid

A Texas law regulating contract carriers operating motor trucks over Texas Highways has been declared constitutional by the Supreme Court of the United States, thus establishing a broad precedent.

In rendering its decision the Supreme Court declared:

"It is well-established law that the highways of the State are public property; that their primary and preferred use is for private purposes; and that their uses for purposes of gain is special and extraordinary, which, generally at least, the Legislature may prohibit or condition as it sees fit."

The Texas law requires contract carriers to obtain permits for operation from the State Railroad Commission, which may refuse to issue a permit if the efficiency of common carriers already serving the same territory will be thereby impaired. The statute also provides for the establishment of minimum rates to be charged by contract trucks, and specifies that these rates shall not be less than those prescribed for common carriers rendering "substantially the same service."



# ACTION

with the New A-C  
**SPEED PATROL**

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the Action  
Magazine



## The Allis-Chalmers Speed Patrol

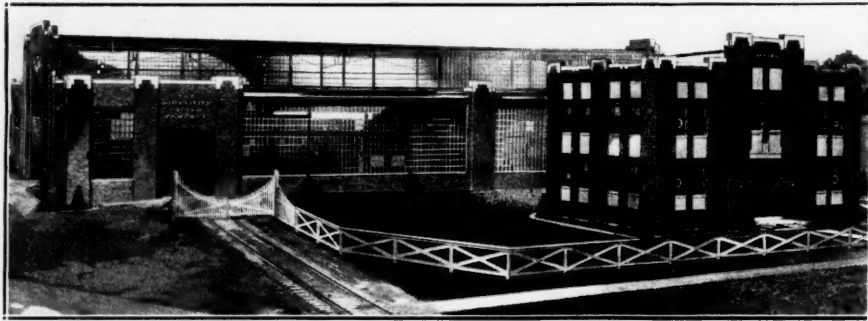
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*Smoother Maintenance at Lower Cost*

# ALLIS-CHALMERS

TRACTOR DIVISION—MILWAUKEE, U. S. A.

TRACK TYPE TRACTORS • ELEVATING GRADERS • TRACK TYPE WAGONS  
POWER CONTROLLED GRADERS • MOTOR PATROL GRADERS • POWER UNITS  
WAGON TRACKS • HAND CONTROLLED GRADERS • WHEEL TYPE TRACTORS



## UNIQUE ASPHALT-PLANT FACTORY

**T**HE Simplicity System Company's factory and office buildings on Riverside Drive in the outskirts of Chattanooga, Tenn., are an outstanding example of modern plant development that conforms to the present trend in decentralization where industries are locating outside of congested centers.

The site selected was one of natural beauty coupled with utility. Great care was taken in securing an attractive design for the structures as well as practicability, in that an abundance of lighting was given to the shop. Since first moving to the new location about two years ago special attention has been given to beautifying the grounds and at this time the plant ensemble presents one of the most attractive industrial layouts in the Chattanooga section.

The main factory building is 120 by 150 feet. The center bay, designed for a 25-ton electric crane, is 58 feet high, while the two outside bays, which are equipped with 3-ton electric hoists, are 25 feet high.

The entire factory is modernly equipped with machinery for fabricating all of the parts entering into the construction of Simplicity Asphalt Plants with the exception of boilers, pumps and engines. In the new factory the complete asphalt plants are assembled and tested, the largest of which weighs 250,000 pounds and requires three railroad cars to transport it.

In the office building shown in the right foreground of the accompanying illustration are the Executive Departments of the company. The top floor is devoted to the Engineering Department, while the Accounting Department occupies the lower floor.

It is interesting to note that The Simplicity System Company, manufacturers of the Simplicity Asphalt Plant, is the only factory in the United States devoted to the manufacture of asphalt plant equipment exclusively. Also, it is worthy of note that after 18 years manufacturing asphalt plants, and during the

depression within the last two years, this Southern manufacturer was able to build and move into this modern factory with its ideal surroundings and ample room for expansion.

It is another illustration that with available steel products from the Birmingham District, abundant and efficient labor, cheap electric power and other advantages, the South offers ideal locations for equipment manufacturers.

### New Rex Construction Equipment

The past year was an active one with the Chain Belt Company in developing new equipment with several new products added to the REX line.

In the REX Road Pump the Chain Belt Company, Milwaukee, Wis., claim to have a unit that will supply an adequate volume of water and fast enough for any REX 27-E Paver, plus sprinkling and curing. This pump will deliver 80 gallons at 500 pounds pressure or 125 gallons at 320 pounds pressure. Tests are said to show that it can handle successfully 1150 feet elevation or 12 miles across country. The vertical pump works, as does the 35 horsepower Waukesha engine drive, through an automotive type Twin Disc Clutch and heat treated reduction gears running on anti-friction bearings. Valves and bearings are easily accessible. Overall design of the pump and chassis is clean and strong, while a low center of gravity and trailer type steering provide a short turning radius.

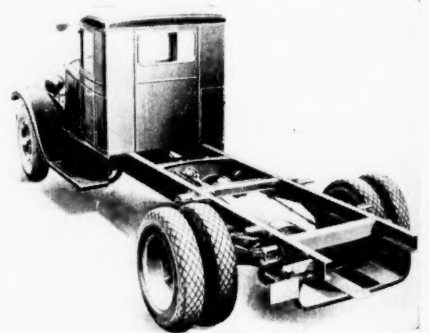
An outstanding development is the REX Pumperete, a device to pump concrete up to distances of 500 feet, and vertically to 75 feet. Basic design of the Pumperete, as well as basic patents, came from Europe, the Chain Belt Company securing American manufacturing and distributing rights from a German-Dutch combination which had developed the unit. At the end of a pumping job, the "Go-Devil" is introduced into the line and forced through the pipe by water pressure, clearing the line of con-

crete without waste and scouring the pipe clean for the next day's run. Another development for 1932 is a complete line of speed primer centrifugal pumps, manufactured in 2, 2½, 4 and 6-inch sizes, while a 5 yard Moto-Mixer (7-yard agitator) was added to the Chain Belt line which includes Moto-Mixers ranging in size from one to four yards. The REX Cold Patch Mixer, illustrated and described in the March number of the MANUFACTURERS RECORD, was one of the important developments. Also, the "Improved" REX Road Paver was announced early in 1933.

### Low-Priced 2-Ton International Truck

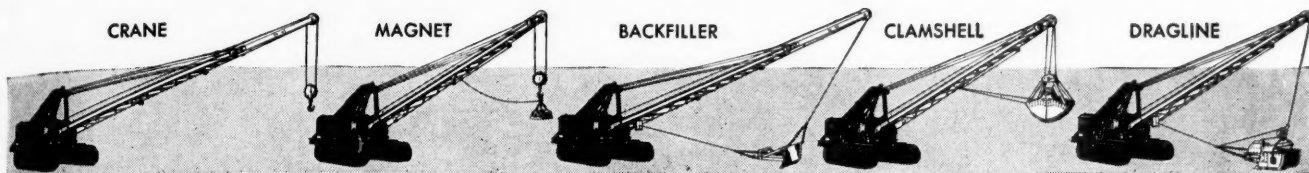
The International Harvester Company of America, Inc., Chicago, introduces a new 6-cylinder Model B-4, low-priced 2-ton truck available in wheel bases of 145 inches for dump and semi-trailer work and 170 and 185 inches for general hauling. This truck is equipped with an engine of International Harvester design and manufacture, developing 63 brake horsepower at 3200 r.p.m. With an 11-inch, single plate, vibration dampened clutch and a four-speed transmission, the engine is mounted as a unit and suspended at three points in the chassis. High road speed is possible in high or direct gear, while the three lower reductions afford ample pulling for hill-climbing and sandy or soft roads. An usually strong frame of heavy pressed steel channels assure ability to carry capacity loads and withstand distortion caused by rough roads. To further increase load-carrying capacity, with an ample factor of safety, a full-floating spiral-bevel-drive rear axle is provided by the use of heavy, rigid, banjo-type, malleable iron housing. Standard equipment includes semi-elliptic auxiliary rear springs, to provide ample spring capacity for heavy loads, and mechanically operated four-wheel service brakes. An important feature, also, are propeller shafts, equipped with universal joints of new design, known as the roller bearing, anti-friction type.

Available in Three Wheelbases

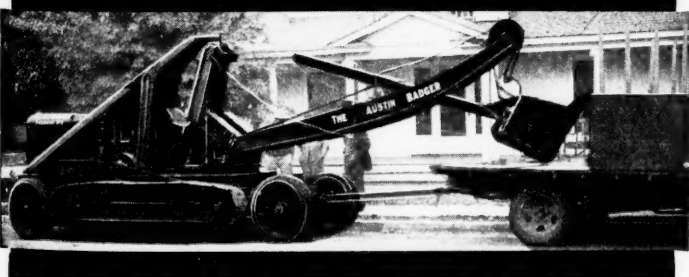


MANUFACTURERS RECORD FOR





# WANTED—a Tough Job!



Just a few minutes are required to place the BADGER on its wheel mounts, ready for rapid traveling. Compute shovel capacity on earth moved per hour—not bucket size.

—cramped working quarters  
—long jumps between jobs

## by the AUSTIN BADGER SHOVEL

Here is a machine that is looking for the meanest jobs you have!

It is not just a big shovel cut down to small cubic capacity. Instead it is designed from the ground up to fill your needs for a machine that can be placed on the job quickly—and that is small enough to work freely in places where a big shovel could not even get in.

You can buy a BADGER Shovel for less than the upkeep on some of the shovels you are now using. When conditions require, a very small expenditure will convert it into a CRANE, MAGNET, BACKFILLER, CLAMSHELL or DRAGLINE.

Write for the New BADGER Catalog—just off the press. See this lively machine at work on jobs that stop heavier equipment.

The Austin-Western Road Machinery Company. Home Office, 400 N. Michigan Ave., Chicago. Branches in principal cities.

105

## The Austin-Western ROAD MACHINERY CO.

ROAD ROLLERS, CRUSHING & SCREENING PLANTS, SCARIFIERS, SWEEPERS & SPRINKLERS, ROAD GRADERS, ELEVATING GRADERS.



MOTOR GRADERS, PLOWS & SCRAPERS, BITUMINOUS DISTRIBUTORS, DRAGS, SHOVELS & CRANES, DUMP WAGONS, SNOW PLOWS.

APRIL NINETEEN THIRTY-THREE

31



# IRON, STEEL AND METAL MARKET

Although business in the steel industry was probably the poorest for the month of March in more than thirty years, leaders in the industry are more cheerful than for some time. There are several good reasons for this improvement in sentiment. In the first place, authorities agree that steel operations "bumped bottom" during March, and while no immediate betterment is now in evidence it is anticipated that the output of steel will be increased in the second half of the year. Encouragement is also taken from the economies effected and the increased operating efficiency, scheduled to make possible comparatively satisfactory showings at 35 to 40 per cent of capacity by the large companies. Another factor scheduled to aid earnings with any appreciable operating gain is the recent price firmness displayed. Up until a few weeks ago shading of prices was rather general and business was accordingly booked at unreasonably low prices. Despite the recent low operating level, there has been practically no evidence of concessions in prices, the "regular market" quotations having been adhered to. The firm stand on steel prices follows an announcement about five weeks ago of higher prices by a maker of sheets, which stand, it is declared, helped the price structure of the entire industry. While there is no tendency toward general advances, it seems that the quiet shading of competitors' prices has been largely eliminated, and that the policy of quoting prices with a view to booking business in an endeavor to keep plants operating at a rate higher than the general average will be abandoned. Last year many producers quoted unjustifiably low prices, based on the belief that business would pick up as the year wore on, and that through higher operating ratios it would be possible to compensate for the losses sustained in filling contracts booked at profitless prices.

While average operations during February were over 20 per cent of capacity, it is estimated that March operations were at about 15½ per cent of capacity. During one week of last month production dropped to about 14 per cent, but the next week increased to 15 per cent. The outlook was considerably improved as March came to a close.

## Increased Output Expected

Steel plant operations in the Youngstown District advanced to 16 per cent of capacity the first week in April compared with 12 per cent for the previous

week and 25 per cent for the same period of 1932. The Republic Steel Corporation is reported on a 16 per cent basis. Output of pipe is expected to gain slightly with the resumption of a Bessemer plant. On April 3 the Mahoning Valley Steel Co. resumed its Niles sheet plant after several weeks idleness, running three of the eight mills. A sharp increase is reported by the Carnegie Steel Company with the resumption of the Ohio works plant after being closed for two weeks. A third of the company's open hearth furnaces, a blast furnace, a Bessemer plant and the rolling mills will be in operation at 24 per cent capacity compared with 13 per cent previously. About 3000 workers are affected by the resumption of activity. Amercian Sheet & Tin Plate Co. is operating 20 of the 30 tin plate mills at its Farrell Works. With resumption of operations in its pipe department, the Youngstown Sheet & Tube Co. added about 150 men and operations in other departments are expected to improve due to the accumulation of orders during the past two weeks of reduced operations.

## Railroad Requirements

Railroad buying promises to be appreciable in the second half of the year, provided the reorganization plans now under discussion in Washington carry through. Economical operation of the rail lines demands that new rails and equipment be purchased, and that a large number of existing cars and locomotives be rebuilt. But under present conditions the rail lines are in no position to finance purchases in volume. Hence, steel producers look for improvement in rail buying through increased traffic that will result as business and industry revive, and from Federal Aid.

Automobile production is slowly improving and warmer weather, it is expected, will bring about a better demand for new cars. Moreover, as general business conditions improve and confidence is restored among the working classes, it is anticipated that old motor cars will be supplanted by new on a large scale. Since the automobile industry has for some time been the principal consumer of steel, any sustained forward movement in business should result in the placing of additional orders for steel by the automotive industries.

## Structural Steel

Structural steel business gives some slight evidence of improvement. A new

outlet for steel developed last month—that for the brewing industry. But the brewers are likely to proceed cautiously with expansion programs. They are, however, buying new equipment and expanding, at least in some instances, existing breweries. Steel will be required for tanks and barrel hoops. Fleets of motor trucks will be needed for delivery purposes. Structural demand in the immediate future will apparently come from Federal building projects, bridges, culverts and viaducts, etc. During last month there was a notable increase in the improvement of oil refining plants, calling for the installation of storage tanks, towers, stills, oil handling lines and miscellaneous machinery and equipment. Also, contracts were awarded for several major pipe lines, and plans were announced for several proposed new lines. Along with the expansion of established industrial plants, a wide diversity of small new industrial enterprises are under way and projected.

Eastern pig iron producers seek orders at a price representing a rise of \$1.00 a ton. However, while inquiry is becoming more general, buying is slow to gain. The scrap markets at the end of the month were firm.

## Exports Up

Export trade in iron and steel products during February was at the highest level since April, 1932, with a total of 63,930 gross tons, while imports at 19,740 tons were at the lowest point for any month since last July, according to figures compiled by the Department of Commerce. Shipments in February, 1933, exceeded those of February, 1932, by nearly 20,500 tons, while imports showed a decline of approximately 7000 tons.

Figures just released by the Department of Commerce reveal that the zinc industry trend was downward during 1932, with production declining 29 per cent in quantity, and 44 per cent in value. Production of metallic zinc in this country last year amounted 221,800 short tons, valued at \$13,312,000, as compared with 313,620 tons valued at \$23,835,000 in 1931.

Follansbee Bros. Co. started its new process tin mill at Wheeling, W. Va., the latter part of March. It is a combination mill, the second unit of which, a 30-inch cold strip mill, will be placed in operation early this month. Improvements in these two departments involved an expenditure of about \$250,000.

# AMERICAN

## BLACK AND GALVANIZED

# STEEL SHEETS

### Special Qualities for Fabricating and Forming

### AMERICAN

PRODUCTS are carefully manufactured in every particular, both mechanically and metallurgically, with close adherence to uniform quality standards, the kind that pleases both in shop and service.

SUPPLIED in Black and Galvanized Sheets, Special Sheets, Formed Roofing and Siding Products, Tin and Terne Plates.

KEYSTONE Copper Steel gives maximum rust resistance—a fact proved by time and weather.

USS STAINLESS Steel Sheets and Light Plates are offered for all uses to which these products are applicable. Write for information and literature.

QUALITY!

SERVICE!

## American Sheet and Tin Plate Company

GENERAL OFFICES: Frick Building, PITTSBURGH, PA.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

AMERICAN BRIDGE COMPANY  
AMERICAN SHEET AND TIN PLATE COMPANY  
AMERICAN STEEL & WIRE COMPANY  
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PRINCIPAL SUBSIDIARY MANUFACTURING COMPANIES:  
COLUMBIA STEEL COMPANY  
CYCLONE FENCE COMPANY  
FEDERAL SHIPBUILDING AND DRY DOCK COMPANY  
ILLINOIS STEEL COMPANY  
NATIONAL TUBE COMPANY

OIL WELL SUPPLY COMPANY  
THE LORAIN STEEL COMPANY  
TENNESSEE COAL, IRON & R.R. COMPANY  
UNIVERSAL ATLAS CEMENT COMPANY

Pacific Coast Distributors—Columbia Steel Company, San Francisco, Calif.

Export Distributors—United States Steel Products Company, New York, N. Y.





# EQUIPMENT

## NEW AND IMPROVED

### Check Valve With Mercoide Flow Switch

Barrett, Haentjens & Co., Hazleton, Pa., manufacturers of centrifugal pumps, announce a check valve equipped with a Mercoide flow switch whose purpose is to shut down the pump in the event it loses its water in operation. This new switch-fitted valve is designated as the Type "M" Check Valve and is designed to meet a need for the flow switch feature.

### Builds Largest Walking Dragline

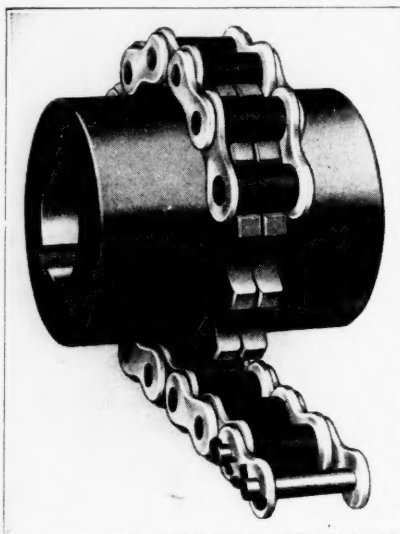
To meet a definite challenge for the production of excavating machinery of larger capacity, as presented in the construction requirements of levee and other projects, the Bucyrus-Monighan Company, Chicago, Ill., has developed a 10-yard walking dragline with a 160-foot boom. This new model is said to be the largest walking dragline ever built, combining the advantages of long reach and big bucket capacity with the exclusive advantages of walking traction. Of similar construction to other Bucyrus-Monighan machines, the new model has been greatly strengthened to meet higher stresses imposed by handling such a large bucket on a long boom. To change the direction the machine is to travel while it is standing on its circular base, it is only necessary to revolve the swinging platform to which the walking shoes are attached. This enables the machine to take a zig-zag path to follow the work, to side-step obstructions, etc.

Bucyrus-Monighan Machine for Large Scale Excavation



### Link-Belt Flexible Coupling

Having manufactured for many years "RC" Finished-Steel Roller Chain with Sprocket Wheels, for power transmission and conveying purposes, the Link-Belt Company, Indianapolis, Ind., now announces the development of a flexible coupling using the new "RC" Silverlink



Roller Chain. The Link-Belt "RC" Flexible Coupling, consists of two cut-tooth sprocket wheels (or coupling halves) and a piece of roller chain to connect them, all working surfaces being machined to close tolerances. A pin-and-cotter link facilitates coupling or removing the chain when desired. Where operating conditions suggest the advisability of protection from dust, dirt or other adverse conditions, the coupling may be enclosed.

### Timken Removable Drilling Bit

The Timken Roller Bearing Company, Canton, Ohio, after three years of experimental and development work, announces a new type of removable drilling bit which is claimed not only to drill further, but to eliminate many expenses, involving investments in drill steel, re-sharpening equipment, labor and transportation. The Timken bit is held tightly against an upset shoulder on the steel by means of a special thread designed for strength and easy removability. The hammer blow is transmitted from the steel through the shoulder to the body of the bit, and none of its force is absorbed by the thread. When a bit becomes too dull for further service, it is merely removed and replaced with a new one, thus eliminating re-sharpening and effecting an economy, it is claimed. Timken bits are forged from a special alloy of fine grained steel made in electric furnaces and carefully heat treated to give maximum strength, life and wear resistance.

### Maintaining Hydraulic Balance in Centrifugal Pumps

An ingenious method of maintaining hydraulic balance in its multi-stage centrifugal pumps has been developed by the Pennsylvania Pump and Compressor Company, Easton, Pa. Impellers of these pumps are so arranged that suction inlets are opposed to each other. Where the number of stages is even, half the impeller inlets face left hand and the other half, right hand. In a 3-stage pump, the suction inlet of one impeller faces left hand and the other two, right hand, and in a 5-stage pump two face left hand and the other three, right. At about the center line in all pumps, two impellers are directly opposed to each other. The Pennsylvania method is accomplished by placing a properly proportioned distance bushing between the two directly opposed impellers, the diameter of this bushing being of such value as to put the rotating element in complete hydraulic balance. In this manner positive hydraulic balance is effected over practically the entire range of the capacity head regardless of the number of stages or whether the stages employ an even or odd number of impellers. A ball thrust bearing is incorporated in the out-board bearing to take care of unusual conditions, and to insure proper alignment of rotating parts.



Here's a **SURE** Way to  
**SAVE** Your Company Money!



The fire-retardant quality of Zinc Chloride-treated wood makes its use ideal for bridges, trestles, docks, etc. The above installation in excellent condition after 15 years during which replacements were unnecessary.

It's explained in this  
**BOOKLET**  
Send for it Today!

Wood preservation is today an economical necessity. Modern executives (architects, contractors, owners) know that expensive waste invariably occurs whenever structural timbers are not protected against ROT, INSECTS and FIRE. Our booklet, "Looking Ahead Twenty Years in Wood Utility", shows you how to prevent this waste.

Zinc Chloride treated wood has many times the life of untreated timbers. It is proof against ROT, secure against TERMITES (White Ants), and resistant to FIRE. It eliminates the need of several costly replace-

ments in floors, sub-floors, roofs and supports—especially in buildings where high humidity develops rot; also in outdoor structures such as bridges, trestles, highway timbers, etc.

Wood treated with Zinc Chloride is clean, similar in color to untreated wood, odorless, non-volatile, and readily paintable.

Commercial pressure treating plants are located conveniently near you. Write us for their names.



## THE GRASSELLI CHEMICAL CO.

Incorporated

CLEVELAND

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Branches in Principal Cities

**GRASSELLI**  
**ZINC CHLORIDE**  
*A Positive Preventive of DECAY in Mill Timbers*

MAIL COUPON TODAY

THE GRASSELLI CHEMICAL CO., Adv. Dept.,  
629 Euclid Ave., Cleveland, Ohio

Please send me, without cost or obligation, your booklet, "Looking Ahead Twenty Years in Wood Utility."

Company \_\_\_\_\_

Attention of \_\_\_\_\_

Address \_\_\_\_\_

City and State \_\_\_\_\_

APRIL NINETEEN THIRTY-THREE

35

## A Better Atmosphere

Competent observers consider that business from now on should mark an upward course. The small business, the decentralized industry, unquestionably, is facing a brighter future than for a long time.

In this situation sound commercial banking must take an important part.

We are prepared to render industry every reasonable service

### Baltimore Commercial Bank

GWYNN CROWTHER, President

Main Office—26 South St., Baltimore, Md.

Capital and Surplus \$1,350,000.00

Member Federal Reserve System

## Electric Bond and Share Company

Two Rector Street  
New York

## FINANCIAL NEWS

### Mississippi Sales Tax

Mississippi continues to report satisfaction with its sales tax and there is reason for it in the fact that returns for nine months have gone beyond the estimates of returns heretofore made for a twelve months yield. The Chairman of the Tax Commission reports that income tax returns, in addition to the receipts from sales tax, have broken all records of the number of returns filed.

Every day Mississippi is placing itself upon a sounder financial basis by reason of its sales tax measure.

### Gold

Nearly \$600,000,000 of gold coin and gold certificates had been returned to the Federal Reserve banks up to the time this was dictated. In addition, according to the Federal Reserve Board, \$319,000,000 in other currency flowed back to take the place of the excessive withdrawals in February. The report shows that between February 1 and March 4 there was a domestic demand for \$1,833,000,000 of currency, and a foreign demand of about \$300,000,000 of gold. As a consequence, the reserve ratio of the Federal Reserve banks declined from 65 per cent to 45 per cent.

Flexibility of the Federal Reserve System has been demonstrated as never before. The reserve ratio advanced between March 4 and March 22, by reason of the returns cited, to 55.5 per cent.

### Farm Mortgage Debt

The present mortgage debt of farmers is estimated at \$8,500,000,000, with probably \$3,500,000,000 added for personal and other debts. The Agricultural Department shows that this mortgage debt rests on more than 40 per cent of the country's farms; 30 per cent of the mortgages are held by individuals; 23 per cent by insurance companies; and 19 per cent by Federal and Joint Stock Land banks. The remainder is divided among commercial banks, mortgage companies, and other firms and agencies.

### Our Railroads

In an able address, John J. Cornwell, General Counsel of the Baltimore and Ohio Railroad, before the Bond Club of Philadelphia, points out that there are more than \$25,000,000,000 invested in the railroads of the country. About \$12,000,000,000 of this is represented by bonds held by individuals and institutions. Leaving out the par value of the stock, amounting to \$10,000,000,000 and considering only bond indebtedness on which market prices of the present place an average value of \$6,000,000,000, Judge Cornwell says, "that is the market price the investing public is putting on the entire railroad plant of the country in which is actually invested some \$27,000,000,000, and the ties, track, land and buildings of which the Interstate Commerce Commission has valued at \$25,000,000,000."

He estimates that a recovery in business of from 10 to 20 per cent, by reason of the economies put in effect, will enable the railroads to meet their bond interest.

### Repeal the Recapture Clause

The retroactive repeal of the recapture clause of the 1920 transportation act has been approved by the House Interstate Commerce Committee, and it is hoped that Congress will act favorably on the Committee's recommendation.

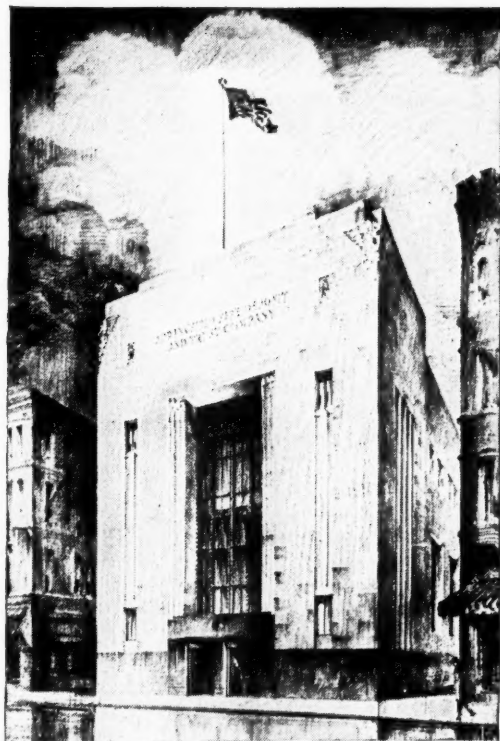
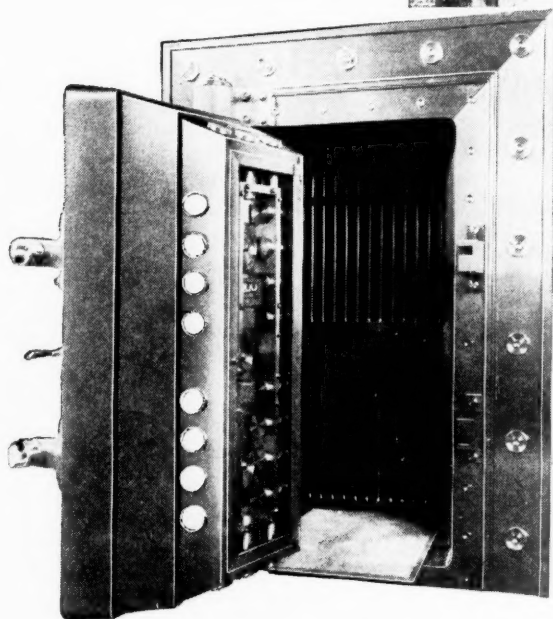
(Continued on page 38)

# SPRINGFIELD SAFE DEPOSIT AND TRUST COMPANY

## *Installs* YORK VAULTS

THIS FINE old New England Banking Institution founded in 1885 selects YORK Vault equipment for its splendid new building. It is one of the most extensive vault installations in New England, comprising three heavy main entrances with provision for upwards of 8,000 safe deposit boxes.

Your bank, too, can enjoy this same skill and experience in vault construction which has made the name of YORK preeminent throughout the world. We invite you to consult with us regarding your requirements.



*Thomas M. James Co.  
Boston, Mass.  
Architects and Engineers*

*A. E. Stephens Company  
Springfield, Mass.  
Contractors and Builders*

It is worthy of note that vault equipment embodying the most modern developments and refinements can be purchased at this time at very advantageous prices. We suggest you write us for further details.

## YORK SAFE AND LOCK CO.

• YORK, PENNSYLVANIA •

MANUFACTURERS AND BUILDERS OF THE WORLD'S GREATEST VAULTS

NEW YORK  
BALTIMORE  
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FIRE AND BURGLAR PROOF SAFES AND CHESTS



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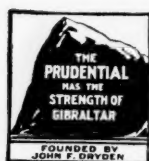
# Pensions for Employees

Age is inevitable—always advancing and always on time.

Lucky the employee who can count on a sure pension somewhere in the sixties.

Fortunate the employer who then can deliver a Prudential annuity contract guaranteeing the life income.

Our latest ideas make the way simple.  
Employers are invited to ask for our  
Group Annuity booklet.



THE PRUDENTIAL  
INSURANCE COMPANY OF AMERICA

EDWARD D. DUFFIELD, President  
HOME OFFICE, NEWARK, N. J.

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## Repeal the Recapture Clause

(Continued from page 36)

It will be remembered that the recapture clause provides that any railroad earning in any year more than 5.75 per cent of the value of its railroad property, must pay half of the excess to the government. It has been estimated that the excess earnings of American railroads from 1920 to 1930 inclusive, aggregated over \$360,000,000, of which slightly over \$10,000,000 had been repaid to the Government.

If Congress repeals the recapture clause, the huge debt mentioned above will be released.

## New Banking Legislation

The country awaits with interest the recommendations of the Government concerning permanent changes in our banking laws and practices. Branch banking radiating from metropolitan centers has strong advocates, as has central banking on the Canadian and English plan. In turn, there are those who strongly argue that American development in contrast to Canadian development has been largely due to independent banks in communities far away from financial centers which, upon their own initiative and cooperation with local pioneers, have developed the country as nothing else would. It is generally recognized, however, that changes in the law should be made which would completely assure closer examination of banks with charters to be granted only upon a higher capital basis than State laws have heretofore permitted.

The majority of bank failures in the last few years have been due to two causes—inexperienced management and insufficient capital.

## Farm Board Losses

Henry Morgenthau, Jr., the head of the Government's new Farm Credit Agency, estimates that the losses from the Farm Board's stabilization and other operations so far have been \$350,000,000. It is estimated that remaining assets may be valued at somewhat more than \$140,000,000. On cotton operations the indicated loss runs to nearly \$160,000,000.

## The Gold Standard

The great Midland Bank of London, in its bi-monthly circular, refers to the financial crisis in the United States and considers the possibility of America going off the gold standard, as well as "the gruesome record of bank failures which have left some areas of the country with currency as their only form of money for local business." It considers departure from the gold standard as unlikely in America and says "America and France between them hold nearly two-thirds of all the monetary gold in the world. The departure of either America or France from the gold standard would so gravely undermine, if not finally shatter, the world's faith in gold as a store of value—a faith which remains strong notwithstanding the events of recent years—that it could not be faced by any of the remaining gold standard countries except with gravest misgivings."

## Federal Supervision of Securities

As this is written another message from the President has been sent to Congress on Federal supervision of securities. He stresses the point that there is an obligation "to insist that every issue of new securities to be sold in interstate commerce shall be accompanied by full publicity and information, and that no essentially important element attending the issue shall be concealed from the buying public."

There probably will be no disagreement with the thought that buyers of securities are entitled to the facts.



Doing on 1½ floors the work which before called for six—one move that cut Phoenix Hosiery Company's overhead \$100,000 a year. Here Cooper Hewitt light shows up clearly every smallest detail of the seamless knitting operation.

COOPER  
HEWITT  
Industrial Illumination

BETTER THAN DAYLIGHT

## This investment in COOPER HEWITT LIGHT helped to save a million dollars

With organization and machinery built up for the boom years, The Phoenix Hosiery Company lost more than a million dollars in the depression year, 1931—and faced the probability of a long period of losses . . . How to stop it? . . . The directors decided to spend at once more than a quarter of a million dollars on improvements—and in 1932 saved more than \$1,200,000 on manufacturing and distributing expense.

Most important of the steps taken were consolidation of plants and concentration of production areas . . . And it is here notable that these steps were largely made possible—and the greatest all-round efficiency achieved—by the addition of over 150 Cooper Hewitt mercury-vapor lamps to the long existing installation of over 600 lamps. Lighting, with each change, got special attention—and Cooper Hewitts assured both quality of light and the

right number of foot candles at every work level.

Because Cooper Hewitt light, for industrial purposes, is *better* than daylight, it does away with all need for window illumination. It gives you every square foot of middle-floor areas for use at all hours. It enables you to centralize your best equipment in one building, if necessary, and abandon unprofitable buildings. It makes it possible to adopt a six hour day and give employment to two or three shifts—with the same equipment and a correspondingly lower overhead and maintenance cost. General Electric Vapor Lamp Company, 819 Adams St., Hoboken, New Jersey.

GENERAL  ELECTRIC  
VAPOR LAMP COMPANY

552 Copr. 1933, General Electric Vapor Lamp Co.

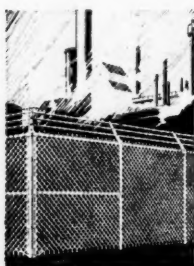


## A \$3,000 Nap

Honest, trustworthy, was this watchman's record—yet, the "human element" took a costly toll—just as it does in hundreds of other similar instances.

Remember that your own plant is not inviolate. That where the boundary lines are unprotected—trespassers, thieves, and malicious intruders may enter at will—tools and valuable material can be removed with but little effort.

Fortunately—the problem, though serious, is easily solved—dependable Cyclone Fence can rapidly and effectively be installed. Economical, too, because this superior safeguard costs so little per year of service without annual upkeep expense.



Made in a variety of styles to meet every need—and erected by factory trained men if desired. Write for detailed information. Address Dept. M.

*Cyclone—not a "type" of fence, but fence made exclusively by Cyclone Fence Company and identified by this trademark.*

### CYCLONE FENCE COMPANY

General Offices: Waukegan, Ill.

Branch Offices in All Principal Cities

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

Pacific Coast Division

STANDARD FENCE COMPANY

Oakland, Calif.

# Cyclone Fence

REG. U.S. PAT. OFF.

## ITEMS OF INTEREST

**TOUGHENED GLASS** is referred to in the Industrial Bulletin of Arthur D. Little, Inc. This product is the result of a recently developed European process. It will withstand contact with molten lead at 620 degrees F. without breaking and will remain relatively tough even at very low temperatures. It has half the strength and twice the elasticity of steel. A three-ton truck was driven upon a one-inch sheet of the glass, a cable passed about both, and the load lifted high into the air by a crane. The glass bent but did not break. When the breaking point finally is reached, the whole sheet shatters into fragments so minute as to cause only minor skin scratches in case of accident.

**AMERICAN CHEMICAL SOCIETY** meetings are not only of interest to the membership, but are extremely important to general welfare in the findings that these men of research are disclosing. At the meeting that was held the latter part of March the program was exceptionally interesting. There were papers on what farmers can do to make profits from 100,000,000 tons of present annual farm waste; a new method to increase the power of automobile motors; the conclusions of a national survey into the iodine and food content of oysters; and another on the efforts being made to find a non-habiting forming narcotic that may be used medicinally and be as useful as morphine.

**HUGE DISBURSEMENTS OF AMERICAN RAILROADS** are referred to by the Commercial & Financial Chronicle as \$3,150,000,000, which hardly stay in the treasuries of the carriers to be counted before they are hurried out to help turn the wheels of industry. Over 92,000 miners and their families are dependent on the coal used by the railroads; 47,000 workers in iron and steel are likewise dependent on the railroads, because 17 per cent of the iron and steel output is for railroads. Our carriers require 20 per cent of the national output of lumber and 33,000 men in that industry are being paid from purchases of this product by the railroads.

In like manner, this vital buying power extends to 19 per cent of all fuel oil produced in the United States, 10 per cent of all copper and brass, as well as a large percentage to industries in varied lines, such as cement, electrical materials, rubber, leather goods, etc.

**REPORTS PERSIST** that Postmaster General Farley is considering the abolishment of the present three-cent postage rate. He told newspaper men he is having a survey made so that the facts might be assembled. It is generally believed that the Postoffice deficit will be wiped out much more quickly by lowering the rate than by keeping it at the present figure. Chairman Mead of the House Postoffice Committee estimates that 8,000,000,000 letters will be handled this year against 13,000,000,000 a year ago. The difference in revenue, by reason of the lessened volume, despite the increased rate, may lose the Department \$20,000,000.

**DURING THE PLOWING SEASON**, agriculture uses more power per day to plow the farm lands of the United States than the power used in all of our other industries combined, according to George A. Krieger of the Detroit Engineering Laboratories. In addition to this, he says, "there are also 1,500,000 stationary gasoline engines on American farms. Eighteen per cent of United States automobiles, are registered on farms and 26 per cent of all motor trucks. Total motor fuel consumption is about one-fourth the quantity of gasoline consumed in the United States."

The South has one-half the farms in the United States.

MANUFACTURERS RECORD FOR



ERNEST T. WEIR, Chairman of the National Steel Corporation, in an address a short time ago, called upon business men to go into politics as a part of our everyday business. Mr. Weir is convinced, as are many others, that we have not done our job well and the only hope of improvement is a rebuilding on the basis of constructive efficiency such as we are capable of if we apply ourselves properly.

NEWSPRINT PAPER is made mostly from Northern or foreign pulpwood gotten from trees that are probably 50 years old. Now we have the news that slash pine from Georgia, only seven years old, has been made at the Savannah experimental plant into newsprint of excellent quality. Millions of acres of cut-over lands in the Southern States on which these fast-growing pine trees can be raised, open tremendous possibilities for a new industry of magnitude and wealth creation.

Dr. Charles H. Herty, a noted chemist, who has through his patient research opened a new era for paper making and industry, refers to it as an "astonishing development". Its importance can hardly be over-emphasized.

SPECIAL TAXES were levied formerly on insurance Companies to provide funds for State insurance supervision. Now they have been diverted into the general funds of States and used for projects having not the remotest connection with insurance regulation. In 1930 it cost the States \$4,500,000 to supervise insurance. But the companies were taxed \$95,000,000 more than this. Insurance policyholders, as a result, are paying twice for the general revenue fund—once as individual or corporate taxpayers, and again as insurance policyholders.

IT IS ANNOUNCED by the United States Geological Survey that there is an abundance of potash in the beds of West Texas and Southeastern New Mexico. Development has proceeded sufficiently to guarantee the American manufacturers of fertilizer they will be independent of foreign supplies in the future. The report then goes as far as to predict that potassium sulphate manufactured from raw materials produced in the regions mentioned, may be sold to the American farmer for \$24 a ton instead of the \$42 price he has been paying for fertilizer made from foreign potash controlled by the German and French syndicate.

ACCORDING TO REPORTS of the National Industrial Conference Board, the industrial population of the United States has lost more than half of the purchasing power it had in 1929. Statistical data have been assembled measuring the loss, which includes reduction in wage scales, shortening of weekly work time, decline in employment and rise in the buying power of the dollar. Computations based on these findings show that the purchasing power of the industrial population is only 46.3 per cent of what it was in 1929. The importance of restoring and mobilizing this purchasing power, the Conference Board points out, is basic for any program of recovery.

PULVERIZED COAL IN PAPER BAGS, containing 50 pounds each, is being delivered from a central pulverizing plant to a laundry in the South, according to "Power." Delivering pulverized coal in special types of cars would give mining companies an outlet for screenings that could be pulverized at the mines and shipped to distant consumers. This suggestion has been frequently made and in the new order of things in the coal industry appears worthy of development. The idea, when extended further, would naturally lead to delivering small lump coal in paper containers for household use.

THE DEPARTMENT OF COMMERCE draws attention to the fact that exports of iron and steel continue to rise as imports fall. February exports in these products were the highest, with one exception, for any month since September, 1931.



## with this **PIPE** Cost-Cutting

TO know Armco Spiral Welded Pipe is to use it consistently—for all purposes where a trim, strong pipe would be thrifty and efficient. Your purpose may be for mill, factory, waterworks or public utilities, yet the probability of stretching your pipe dollars is inviting.

Initial costs will be as low, and perhaps lower. However, it is when your pipe crew sets to work that costs begin tumbling. You see, Armco Spiral Welded Pipe is unusually easy to handle, free from cumbersome surplus weight. Veteran pipe men tell us that they can string lengths and couple or field-weld in much less time than it takes for heavier types. They should know.

But your savings do not end there. When you turn the liquid, gas or semi-solids into the line, you notice that flow is steadier, volume is fuller. If it is a pressure line, the pump-load lightens perceptibly. You will thank the sheer-smooth interior of Armco Pipe for those improvements.

Have your pipe custom-made to your needs—in any length up to 40 feet, in any diameter from 6 to 24 inches, and in the wall-thickness that meets your pressure requirements and expected service life. Just get in touch with our nearest office.

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**ARMCO**  
**SPIRAL WELDED PIPE**

—thrifty to buy • quickly installed  
• efficient in service

## INDUSTRIAL NEWS

### Northwest Announces New Distributors

Equipment distributors in Baltimore, Cincinnati and Detroit have been added to the sales organization of the Northwest Engineering Company, Chicago, Ill., manufacturers of excavating and material handling equipment. The company announces that John C. Louis, Inc., Baltimore, will handle the Northwest account in Maryland and Washington, D. C.; the Blaisdell & Folz Equipment Company in Cincinnati and C. J. Burke, Detroit, in Eastern and Southern Michigan.

### Bucyrus-Erie Developments

The policy of the Bucyrus-Erie Company, South Milwaukee, Wis., of constantly improving its products has been carried on intensively since 1930. Developments in 1932 cover an entirely new series of revolving excavators, available with gasoline, Diesel or electric power, ranging in size from  $\frac{1}{2}$  to  $2\frac{1}{4}$  cubic yards; a specialized series of draglines from 1 to 3 cubic yards capacity; a new, light  $\frac{1}{2}$ -cubic yard shovel, which may be equipped with gasoline, Diesel or electric drive, and is available as shovel, dragline, crane, clamshell, drag shovel or skimmer scoop. The Bucyrus-Monighan Company, for which the Bucyrus-Erie Company is sales agent, has placed a 10-cubic yard walking dragline on the market with a 160-foot boom. For open pit mines, a new counter-balanced

hoist shovel was developed with an 18-cubic yard dipper, and a line of steel dragline buckets were introduced. Bucyrus-Erie tunnel shovels were improved and improvements also were made in the Bucyrus-Erie dredge line, while the Loadmaster Crane, with full revolving boom, was further developed. This crane is now available with McCormick-Deering, Case or Caterpillar power units.

### Indirect Heating Unit

A new indirect heating surface to be known as the K-Fin Bentube Heater, for use in heating and ventilating, air conditioning and cooling systems, is announced by the Griscom-Russell Company, New York City. Substantially built but light in weight, units are furnished complete and self-contained in a range of sizes and lengths. They are distributed exclusively through Hitchen Engineering Company, Inc., New York City.

### Contractors' Equipment Offered

By order of Dimarco and Reimann, Inc., subway contractors, a lot of contractors' equipment and supplies will be offered at public auction April 25 on the premises of the contractors at 199th street and Jerome avenue, New York City. The sale will be under the management of Industrial Plants Corporation, auctioneers, liquidators and appraisers, 25 Church street, New York. Ma-

chinery consists of air compressors, cooling tower, portable compressors, shovels-crane, tractors, tunnel muckers, drill sharpeners, locomotives, ready mix concrete bodies, rock drills, concrete breakers, drifters, pneumatic tools, road rollers, paving mixers, trucks, automobile, drill steel, storage bin, pumps, roller conveyor, pipe and bolt machine, drill press, lathe, battleship buckets, grouting machine, boiler, air hoist, hydraulic jacks and miscellaneous equipment. Descriptive catalog is available.

### Will Complete Modern Plant

Taylor & Company, Inc., Norristown, Pa., manufacturers of vulcanized and phenol fibre products, including noiseless gears, announce their intention to complete the construction of a new and modern plant and begin operations early in May. The executive organization of Taylor & Company and operating personnel are composed of men formerly with the Diamond State Fibre Company and its subsidiary, The Celoron Company.

### Kwik-Mix Bituminous Mixer

The Kwik-Mix Division of the National Equipment Corporation, Milwaukee, Wis., is distributing a bulletin illustrating and describing a new bituminous mixer which it recently developed. Built in two sizes—6 to 8 cubic feet and 10 to 12 cubic feet—the new mixer has specially designed, adjustable, manganese "saw-tooth" blades, with a criss-cross mixing action, and a detachable heater. Easy operation and thorough, efficient mixing of evenly coated material are special features of the machine, which is described as permitting "economical placing of cold or hot patch material on location for bituminous roads.

(Continued on page 44)



## 3 miles of Washing

**F**OR the same amount of money spent for electricity in 1928, the average Associated customer last year got enough additional energy to **run a washing machine for three years.** *If this washing were strung on one long clothesline, it would reach for three miles.*

The dollar spent for electricity gives bigger value now because residential rates in the Associated System have declined steadily. Lower rates have led to greater use of electric energy. The average Associated domestic customer now uses 29% more electricity than in 1928.

**Associated Gas & Electric System**  
61 BROADWAY • NEW YORK

# The NEW GALION CHIEF

## A 6-Cylinder Motor Roller with



**Greater**  
*Power*  
*Speed*  
*Economy*  
*Performance*  
*Ability*

Here is the last word in a three-wheel Motor Roller. Built in 10 and 12-ton sizes with Hydraulic Steering and Scarifier—Differential Lock—Roller Bearing mounting—Cushioned Motor—electric starter and generator—short Wheelbase.

*Catalog No. 150 gives complete data. Send for it*

## The Galion Iron Works & Mfg. Co.

### Galion, Ohio

Rollers — Graders — Maintainers — Spreaders — Rooters — Culvert Pipe

### SAND PUMPS

A wide range of  
types in sizes 4" to 15"

For belt drive and for direct  
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*Illustrated booklet on  
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**GEORGIA IRON WORKS**  
AUGUSTA, GA.

# LIMA

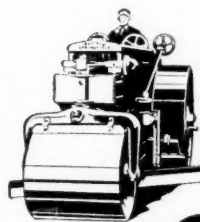
SHOVELS-CRANES-CLAMSHELLS-DRAGLINES  
3-4 yd., 1 yd., 1 1-4 yd. and 1 1-2 yd.

(A TYPE AND SIZE FOR EVERY JOB)

**The Ohio Power Shovel Company**

Division Lima Locomotive Works, Incorporated

Lima, Ohio, U. S. A.



**BUFFALO-SPRINGFIELD**  
Three Wheel and Tandem



BUFFALO-SPRINGFIELD'S complete range of models in both three-wheel and tandem rollers permits the purchaser to select a machine properly powered, designed, and speeded for his work.

*Full details will be  
furnished on request.*

**THE BUFFALO-SPRINGFIELD ROLLER CO.**  
SPRINGFIELD, OHIO



(Continued from page 42)

#### Atlantic Creosoting Promotions

John Talliaferro, formerly Eastern Sales Manager of the Atlantic Creosoting Company, Inc., New York City, has been promoted to Vice President in charge of the company's Savannah, Ga., plant, according to announcement, and J. C. Postell, formerly Vice President of the Norfolk, Va., plant, has been transferred to New York as Vice President in charge of Plant Operations and Sales. The company operates plants at New Orleans, Savannah, Winfield, La., Louisville, Miss., Norfolk and Jackson, Tenn., for the production of railroad ties, piling, poles and creosoted timbers of all kinds, and creosote oil in cargo or tank car lots. Its affiliates are the American Creosote Works, Inc., and the Savannah Creosoting Company, Inc.

#### Multi-Temperature Indicator

The Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., has developed a temperature recorder, an "Electrotemp," which measures the entire range from ice point to steam point and permits a check-up of temperatures at a central point from remote sections. With the rapid development of air-conditioning of buildings, it is important that the temperature of all parts of the structure be known at all times, and this fact has been mainly responsible for the development of this new temperature control. The new device may be plugged into any electric light socket and wired up to as many extensions as necessary.

#### Officers Hercules Powder Company

Directors of the Hercules Powder Company, Wilmington, Del., have re-elected the following officers: R. H. Dunham, presi-

dent; C. A. Higgins, J. T. Skelly, T. W. Bacchus, C. D. Prickett, G. G. Rheuby and N. P. Rood, vice presidents; C. C. Hoopes, treasurer, and E. B. Morrow, secretary. Products of the company include explosives, smokeless powder, naval stores, cellulose products, chemical cotton, paper making chemicals and general industrial chemicals and raw materials.

## TRADE LITERATURE

**Convertible Power Shovel.**—Catalog 30-A, issued by Bay City Shovels, Inc., Bay City, Mich., is devoted to the Bay City Model 30 Convertible Power Shovel, with an economical weight of 15 tons and powered by a 53 horsepower Hercules power unit. The catalog contains detailed specifications, working range diagrams and illustrations of this standard half-yard shovel, convertible to dragline, skimmer, clamshell of 6-ton crane.

**Hydraulic Type Stoker.**—The Patterson Foundry & Machine Company, East Liverpool, Ohio, which recently announced its entrance in the stoker field, is distributing a folder featuring the Patterson Underfeed Stoker of Standard Hydraulic Type, designed for large heating or small power loads.

**New Motor Grader.**—A new motor patrol grader known as "The Speed Patrol" has been introduced by the Tractor Division, Allis-Chalmers Manufacturing Company, Milwaukee, Wis. This machine is powered for normal maintenance in third gear at 5 miles an hour, and it is so named because of its ability to speed up maintenance work.

**All-Weather Waterproofing.**—The Master Builders Company, Cleveland, Ohio, manufacturers of concrete hardeners, waterproofings, masonry treatments and finishes, is distributing a circular devoted to "Master-seal All-Weather Waterproofing," a colorless waterproofing developed by the company, which may be applied to both wet and dry walls and at any time when the temperature is above 32 degrees Fahrenheit. Treatment does not change the appearance of a structure.

**Cletrac Crawler Tractors.**—The Cleveland Tractor Company, Cleveland, Ohio, manufacturer of Cletrac Crawler Tractors in five sizes—from 15 to 83 horsepower—is distributing literature illustrating and describing its Model "80" Cletrac, recently developed for long life and economical operation. Features of construction designed to enable Cletracs to endure the strains of rough jobs are outlined.

**Liquid Glass-Coating.**—The Skybryte Company, Cleveland, Ohio, is distributing a folder devoted to Skyco No-Glare, a sky-blue liquid that may be applied at low cost to windows for eliminating heat and glare of direct sunlight. No-Glare is waterproof, dries quickly, leaving an even opaque film that allows 94 per cent of the light to penetrate.

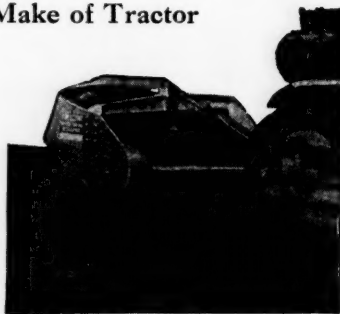
**Free-Wheeling Clutch.**—The Kelpo Clutch Company, Rockford, Ill., manufacturers of free-wheeling clutches, has issued a new illustrated catalog devoted to the Kelpo Free-Wheeling Clutch for industrial purposes. The catalog also presents a table of dimensions, ratings and weights.

## Crescent Hydraulic Scraper

A Powerful Digger Ready to Use  
With Any Size or Make of Tractor

Here is a tractor-drawn scraper that will dig clay or hard-packed material without previous plowing. Anybody can operate it. Write for Bulletin 138.

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STEEL

Square and Triangular Mesh  
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The strongest and lightest  
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## BRICK PAVEMENTS —Always Dependable



*East Ninth Street, Little Rock, Arkansas. Built 1905,  
repaved in 1927, 3-inch brick, asphalt filler.*

**Now,**  
more than ever—  
**Long Life and**  
**Low Upkeep**  
**Are Appreciated**

**T**HE wisdom of building brick pavements with their low upkeep costs has been more clearly apparent in the past two years.

In good times or in dull times, brick surfaced roads serve the public well. Even veteran pavements 40-odd years old require little or no money from the treasury and the taxpayers.

Brick is a thrifty, common-sense pavement. Nothing left to chance in constructing it. Completed, it is well-nigh indestructible. What's more, you can be sure expensive bases will be fully protected from weather as well as traffic.

The modern pavement is brick. Recommend or specify it on new construction. Make old, failing pavements as good or *even better* than new by resurfacing with brick.

For further information about brick write National Paving Brick Association, 1245 National Press Bldg., Washington, D. C.



## Mascot Chatts

ASPHALTIC ROADWAY GRAVEL

ROOFING GRAVEL CRUSHED STONE

ASPHALT FILLER DUST

**American Limestone Company**  
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## SAND—GRAVEL—BRICK FILTER GRAVEL

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Roads and Buildings

Filter Gravel, all sizes—Building Bricks

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Immediate Delivery - - - Manufacturer's Prices  
Canvas in every weight for every use.

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## CRUSHED LIMESTONE Best for All Purposes

We manufacture all sizes of stone suitable for all classes of road building and concrete work where only a high-grade limestone is required.

Quarries opened up in 1912.

Capacity 8000 tons daily.

### Four Quarries

Blue Ridge, Va. Pembroke, Va. Pounding Mill, Va.  
Boxley, Greenville County, Va.

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# BLASTING CHANNELS FOR FLOOD CONTROL

**A** REVOLUTIONARY method of flood control has been developed. It involves the use of dynamite on a large scale to blast channels as wide as 70 feet—something unheard of up to the present time. The new method to widen and straighten streams and remove obstructions to the natural flow of the water has been successfully tried in the Atchafalaya section of Louisiana by United States Army officers in charge of flood control. They were assisted by explosives experts. In some cases in this section rain water and the overflow of streams cause floods which extend from ten to twenty-five square miles.

The explosion of the dynamite loosens the earth on the sides and the bottom of the new channel. The water, suddenly released, rushes through quickly scouring it out.

A striking instance of the success of the new method has just taken place in the country east of Port Barrie, Louisiana, where relief work was imperative because of flood conditions. In this case the channel leading from Lake Neupe to Opelousas Bay was in part completely clogged with sand and silt. In fact, there was no channel. Willow trees were growing on the sand bar which had filled up the original place of the channel. As a consequence, waters coming down through Lake Neupe were completely blocked and overflowed into the surrounding country. It was felt that if the natural channel could be blasted out and the original method of drainage restored, it would result in relief for the whole area.

The engineers, therefore, considered the possibility of blasting out the entire obstruction which was 550 feet long. In order to adequately carry off the water, the channel had to be at least 70 feet wide. The method followed is what is known as the relief method, which means shooting three parallel ditches, the two outside ditches first. The willows which covered the sand bar blocking the channel, were cut down. This was for the purpose of speeding up the loading of the dynamite. A crew of ten men was organized in order to place the explosives. A punch bar, consisting of six foot lengths of one and a half inch pipe, was used. The lower ends were formed into cones and the upper ends of the bars were attached to cross bars of similar type. In operation, these punch bars

were pushed down until they had reached the desired depth. Sticks of dynamite were then put down in these holes. The whole crew of ten men loaded the explosive, consisting of about a ton of dynamite, in approximately six hours. This first relief ditch where the dynamite was placed was about 30 feet wide and 550 feet long. It was estimated that the explosion of the dynamite would produce a ditch about 30 feet wide and three feet deep. The entire 70 foot width was exploded in three shots and actually produced a ditch of the depth and width required.

Ditch blasting with dynamite has been practiced for years and the general principles involved in it are those on which the use of the explosive in the new methods of flood control are based. The ease of transporting the explosive to the place where the shot is to be made and the fact that dynamite can be detonated even under water, are factors which enter into calculations in the new methods of fighting the damage caused by the extensive floods.

## \$7,500,000 House Office Building

Providing a 2-room suite for each member of the House of Representatives in Congress, the new House Office Building in Washington has been completed at a cost of \$7,500,000. The structure occupying two blocks west of the present House Office Building, is of steel frame construction, on a reinforced concrete foundation, faced with granite to the first floor level, and above this with

white marble backed with brick. Heat will be supplied by a vapor system, for which steam will be generated by the Capitol power plant. Plans for the building were prepared by the Allied Architects of Washington, Inc., and general construction contract executed by the Consolidated Engineering Company, Inc., Baltimore, which also did the excavation. G. A. Weschler, Washington, was the mechanical engineer. Construction was under the supervision of David Lynn, Architect of the Capitol.

Contract for exterior marble, involving a cost of more than \$800,000, was awarded to the Georgia Marble Company, Tate, Ga.; for reinforcing steel and specialties to the Truscon Steel Company, Youngstown, Ohio; for structural steel to the American Bridge Company, New York, and for interior marble, tile and limestone, to the Hilgartner Marble Company, Baltimore. Among the subcontractors were the following:

**Gypsum slab roof**—United States Gypsum Company, Baltimore.

**Kalamain and copper-covered doors**—E. H. Friedrich Company, Holyoke, Mass.

**Ornamental iron, bronze, aluminum, etc.**—Art Metal Construction Company, Jamestown, N. Y.

**Tile and terrazzo**—American Mosaic Company, Inc., Washington.

**Glass and glazing**—Pittsburgh Plate Glass Company, Baltimore.

**Mail chutes**—Cutler Mail Chute Company, Rochester, N. Y.

**Package conveyor**—Haslett Chute & Conveyor Company, Oaks, Pa.

**Steel erecting**—McDonald Steel Erecting Company, Inc., Washington.

**Rubber tile flooring, linoleum and cork tile**—David E. Kennedy, Inc., New York City.

**Mill and cabinet work**—Robert Mitchell Manufacturing Company, Cincinnati, Ohio.

**Cooling and air conditioning system**—Cooling & Air Conditioning Corporation, New York.

**Passenger and freight elevators and electric lift**—A. B. See Elevator Company, Inc., Washington.

**Stairs and treads** (from Rockwood, Ala.)—Shawnee Stone Company, Bloomington, Ind.

**Safes**—York Safe & Lock Company, York, Pa.

**Acoustical treatment**—Thomas Moulding Acoustical Engineering Company, Chicago.

**Sandstone flagging**—Crab Orchard Stone Company, Nashville, Tenn.

New House Office Building Recently Dedicated in Washington



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truck, barge or scow from  
Baltimore, Md., and North  
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Meet Your Requirements*

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experience in successfully executing large  
construction contracts of various kinds is  
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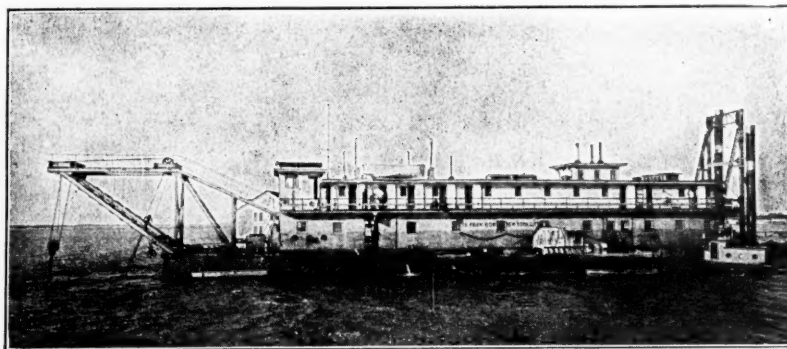
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*Contractors to the Federal Government*

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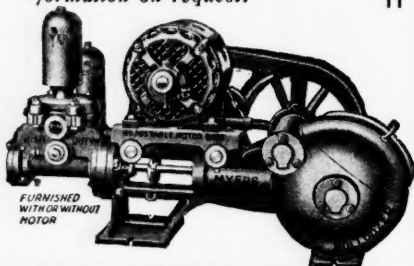
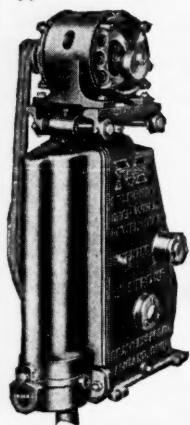
# MYERS

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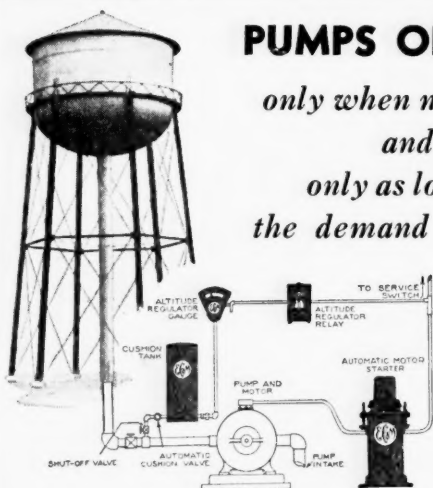
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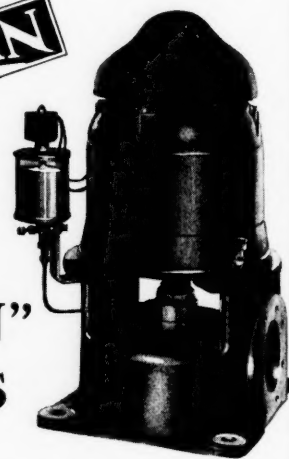
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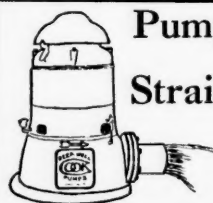
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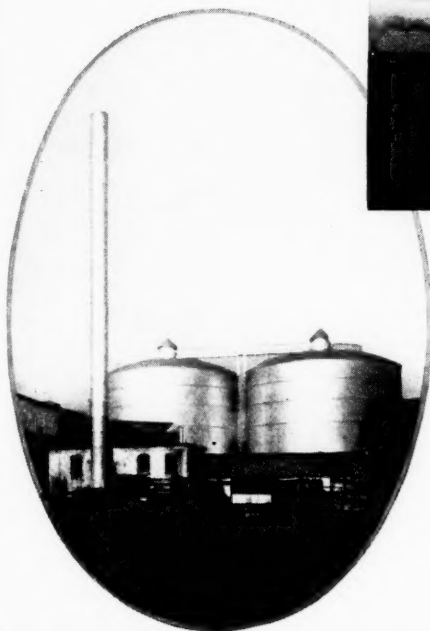
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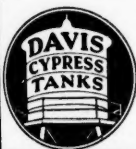
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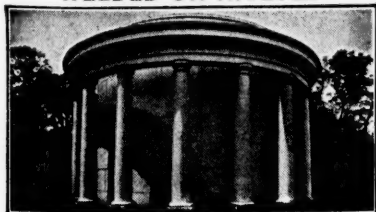
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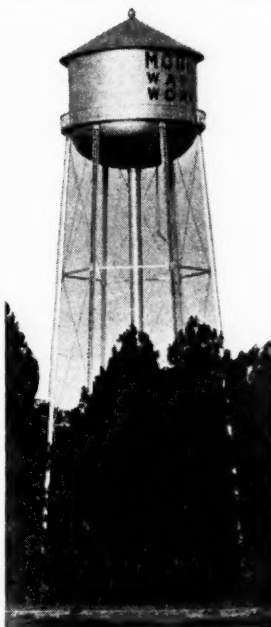
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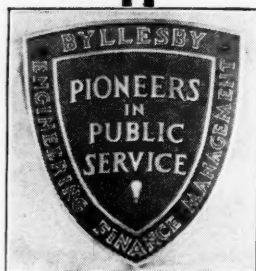
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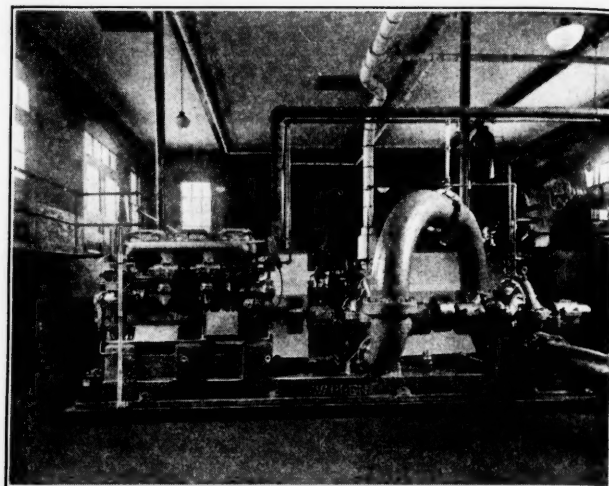
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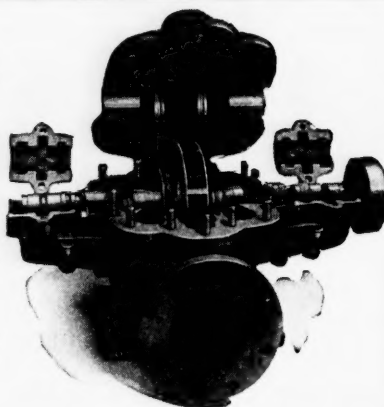
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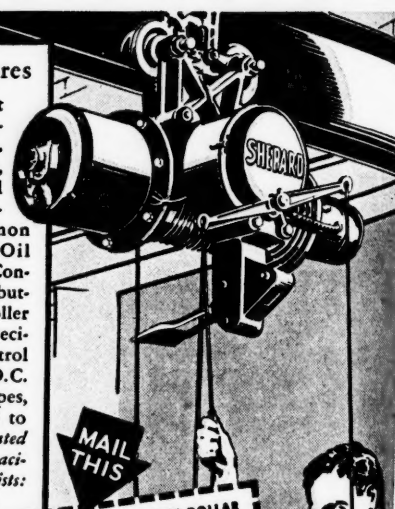
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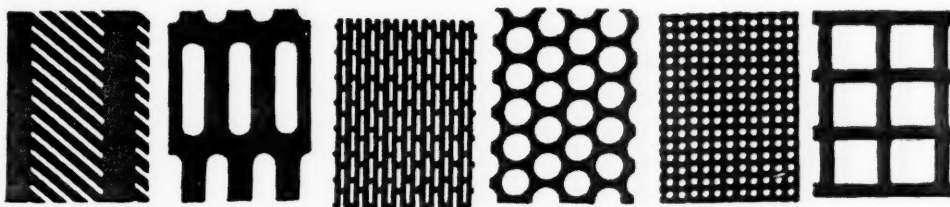
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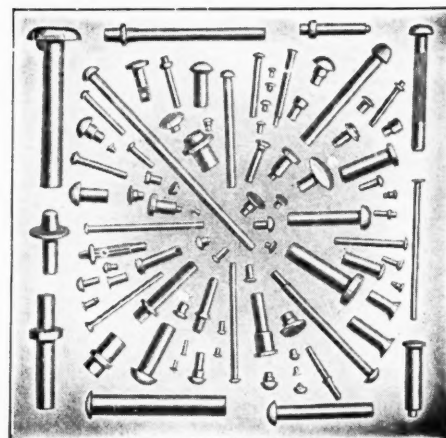


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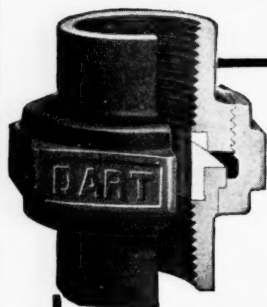
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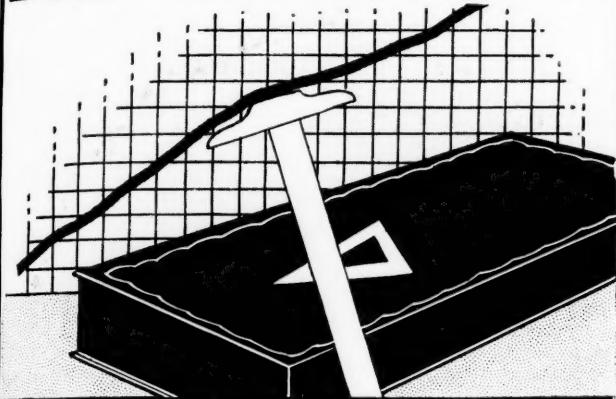
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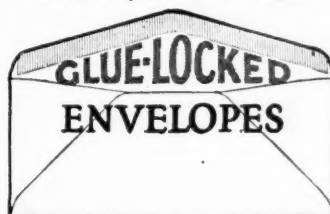
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**TRUCKS:** 3 ton International; 1 1/4 ton International, stake Body.

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**DRILL STEEL:** About 10 tons 1 1/4" Drill Steel with shanks and bits; (majority long lengths).

**STORAGE BIN:** 150 ton capacity Blaw-Knox 2 compartment Material Bin with weight batch meters.

**PUMPS:** 2—Domestic 6" Centrifugal, gas operated Portable Pumps, equipped with 4 cylinder LeRoi Engines; 2—Domestic 4" double plunger Portable Type, 2 cylinder LeRoi Gas Engines; 1—Marlow Mudhog 4" double plunger type, on wheels, equipped with 2 cylinder LeRoi Gas Engines; 2 Cameron 2" Air Pumps; 1 Cameron 4" Air Pump; 1 Homelite Gas Pump, 2" suction; 1 Homelite Gas Pump, 3" suction; 1 Homelite Pump, 4" suction driven by 15 H.P. G.E. Motor; 1 LeBour 4" Centrifugal Pump driven by 20 H.P. Star Motor.

**ROLLER CONVEYOR:** About 300 ft. Roller Conveyor in sections of about 10' each.

**PIPE & BOLT MACHINE:** Oster Pipe & Bolt Threading Machine, capacity 1 1/4" to 6", complete with all necessary dies; belt driven from motor operated jack shaft; this is a 3 speed machine.

**DRILL PRESS:** 20" Champion, belt driven from motor operated jack shaft.

**LATHE:** Monarch Lathe, loose change gears, belt driven from motor operated jack shaft.

**BATTLESHIP BUCKETS:** 8—2 1/2 yd. capacity Battleship Buckets.

**GROUTING MACHINE:** 2 Union Iron Works Grouting Machines.

**BOILER:** 100 H.P. Nagle Locomotive Type Boiler, with 300 ft. of stack.

**AIR HOIST:** Sullivan double driven Air Hoist.

**HYDRAULIC JACKS:** 3—50 ton Dudgeon Hydraulic Jacks.

**MISCELLANEOUS:** 4 Iron Mules; Air Forge; 300 lb. Anvil; Combination Welding and Cutting Unit with hose; Lead Heater with pressure tank, pot and ladle; 4—1 yd. self dumping, self righting Buckets; 2 ton chain blocks; 3—1 yd. scale boxes; 600 Watt Homelite Generator.

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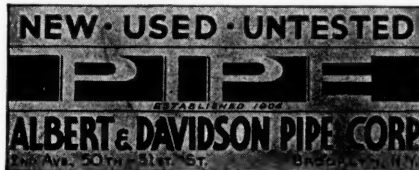
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200 Amp. Gen. Elec. WD with 7½ HP 3-60-220 volt motor, starter, stabilizer, cable, mounted on portable truck.

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600 cu. ft. Ingersoll-Rand type XB, 16 & 10 x 14 complete with 75 HP slip ring motor, receiver and belt.

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22 KW 125 volt DC Allis-Chalmers generator direct connected to 6 x 6 American-Blower vertical piston valve engine.

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75 HP, 1200 RPM, 3/60/220/440 volt, Gen. Elec. with direct connected exciter.

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COMPLETE VENEER  
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4', 7' and 9' BAND SAW MILLS, automatic filing machines.

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24 Chain CONVEYORS.

2-200 K.W. TURBINE GENERATORS, 50 A.C. Motors, 1 to 50 H.P.

5 Water Tube BOILERS (total 1500 H.P.).

4 Derricks, 3 Hoist and all auxiliary equipment.

*Easy Water Shipment.*

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All steel 14" wide gravity conveyor rollers, ball bearing.

Chain falls, 1 to 5 ton capacity.

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2-250 H.P. Scotch Marine Boilers, 10' diameter x 17'9" long; 2-Morrison Corrugated Furnaces, 125 lbs. pressure. Complete.

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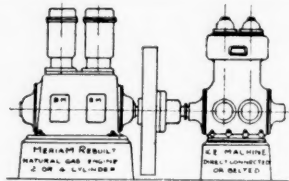
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Machine Tools—  
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1—Generator set, motor G.E. 75 H.P., 3 phase, 60 cycle, 220 volt, direct connected to 45 K.W. Burke generator, 125 volt, 360 amperes. Price \$325.00.

1—Generator set, Crocker-Wheeler motor, 35 H.P., 3 phase, 60 cycle, 220 volt, direct connected to Crocker-Wheeler generator 19 K.W., 250 volt, 100 amperes. Price \$250.00.

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By the Insurance Department.  
**CONDENSED STATEMENT**  
SHOWING THE CONDITION OF THE  
**Fidelity & Guaranty Fire Corp.**  
**Baltimore, Md.**

DECEMBER 31, 1932

Bonds Amortized, Stocks Valued on Convention Plan.  
Total income during the year \$3,254,304.90  
Total disbursements during the year 3,477,461.26  
Total admitted assets 4,787,920.56

Total liabilities except capital (including Contingency Reserve \$250,000.00) \$3,077,644.03  
Capital actually paid up in cash \$1,000,000.00  
Surplus over all liabilities 710,276.53

Surplus as to policy holders 1,710,276.53

Total liabilities 4,787,920.56  
Amount at risk in United States December 31, 1932 683,693,746.00  
Risks written in Maryland during 1932 43,294,140.00  
Premiums on Maryland business in 1932 197,407.37  
Losses paid in Maryland in 1932 56,211.87  
Losses incurred in Maryland in 1932 57,639.87

## STATE OF MARYLAND

Office of the  
**STATE INSURANCE DEPARTMENT**  
Baltimore, Md., March 1, 1933.

I Herby Certify, That the above is a true abstract taken from the Annual Statement of the **FIDELITY AND GUARANTY FIRE CORP., BALTIMORE, MD.**, for the year ending December 31, 1932, now on file in this Department.

**WILLIAM C. WALSH**,  
Insurance Commissioner.

## Business Opportunities

\$6,000,000 annually leaves the South for lemons transported half way around the world. A good, thin skin, juicy, commercial size lemon, adapted to Florida growing conditions, has been developed and proved—a problem that took 20 years to solve. Advise the amount you could invest and we will submit a sound proposition offering unusual opportunities.  
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Bids close April 18, 1933.

## Delaware Road Work

ADVERTISEMENT FOR BIDS

Dover, Del.

Sealed proposals will be received by the State Highway Department, at its office, Dover, Del., until 2:00 o'clock P. M., Eastern Standard Time, April 18, 1933, and at that place and time publicly opened, for contracts involving the following approximate quantities:

**CONTRACT 182E**  
**CONCRETE APPROACHES**  
**DRAWYERS & APPROQUINIMINK**  
**BRIDGES, 2000 FT.**  
250 Cu. Yds. Excavation  
10,000 Cu. Yds. Borrow  
1,070 Cu. Yds. Concrete Pavement  
650 Lin. Ft. Prem. Cork Exp. Joint  
5 Cu. Yds. Class A Concrete  
200 Lbs. Reinforcement  
400 Lbs. Catch Basin Castings  
40 Lin. Ft. 24 in. R. C. Pipe  
1,300 Lin. Ft. Wire Cable Guard Rail  
S End Post Attachments

**CONTRACT 2 (N-4)**  
**INDIAN RIVER INLET JETTY**  
7,000 Lin. Ft. Piling  
80M Ft. B. M. Lumber

Performance of contract shall commence within ten (10) days after execution of the contract and be completed as specified.

The above are Emergency Relief Contracts with special provisions to govern same. The minimum wages paid will be thirty cents per hour for unskilled labor and forty cents per hour for skilled labor in New Castle County and twenty-five cents per hour for unskilled labor and thirty-five cents per hour for skilled labor in Kent and Sussex Counties.

Monthly payments will be made for 90 per cent of the construction completed each month.

Bidders must submit proposals upon forms provided by the Department.

Each proposal must be accompanied by a surety bond, certified check or money to the amount of at least ten (10) per centum of the total amount of the proposal.

The envelope containing the proposal must be marked "Proposal for the construction of State Highway Contract No. \_\_\_\_\_"

The contract will be awarded or rejected within twenty (20) days from the date of opening proposals.

The right is reserved to reject any or all bids.

Complete sets of plans and specifications may be obtained after April 10, 1933, upon receipt of two dollars (\$2.00) for each contract, which amount will not be refunded.

**STATE HIGHWAY DEPARTMENT**  
Dover, Delaware.

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We are offering the best in Good used Equipment for Industrial plants of all kinds, from the Old Hickory Powder Plant as well as other plants purchased by us recently. Let us quote. Our prices are always money saving.

Just a few of our many offerings:

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1-300 H.P. Heine; 3-250 H.P. B. & W.; 4-600 H.P. Edgemoor; 1-250 H.P. Marine; 9-150 H.P. H. R. T.; 1-200 H.P. H. R. T.

### ENGINES

1-1500 Cross Compound Corliss; 2-350 H.P. Nordberg; 1-300 H.P. Lane Corliss; 1-12x10 American Ball duplex; 1-80 H.P. Ames Automatic; all sizes vertical engines, 5 to 60 H.P.

### CENTRIFUGAL PUMPS

5-16" turbine driven; 2-14" turbine driven; 3-14" motor driven; 4-8" turbine driven; 1-10" Goulds; 2-8" Goulds; 1-8" Goulds; 2-5" Goulds; 1-4" Goulds, all motor driven; all sizes belted centrifugals from 4" to 10" in various types, including several dredge and sand pumps.

### STEAM PUMPS

50-Steam pumps, single and duplex; tank pumps, boiler feed and general service pumps, in all sizes; all standard makes and in perfect condition.

### MOTORS

100-Electric Motors, slip ring and squirrel cage; 220, 440 and 550 volts; sizes range from 7½ H.P. to 300 H.P. With or without starters; all standard makes and perfect condition.

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200-Steel Tanks, various sizes, for pressure and storage; all in good condition. Send for list.

### CHEMICAL EQUIPMENT

Still, columns, autoclaves, centrifugal wringers; nitrating units; benzol recovery equipment; ammonia recovery equipment; towers, acid eggs; acid pumps and miscellaneous equipment of all kinds. Send us your inquiries.

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1-Steam Jacketed, ribbon conveyor Mixer; 1-Day 20" Paint Mill; 1-Kaestner 42" Buhr Mill; 1-Aero Pulverizer; 1-Hardinge 8' x 30" Pebble Mill; 1-Raymond 4 roll high side Mill; 4-Agitators and Mixing Pots.

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We have just purchased equipment for a pulp plant, including digester and diffuser building, with capacity of 100 tons pulp per day. Detail information on request.

Complete 50 ton pulp mill with wood room, caustic recovery, digester, tanks, power plant, etc. Also beater, Jordans, stuff pumps, 72" wet machine, 60" Fourdrinier, calenders, winders, etc.

### BRIQUETTING PLANT

Complete 40 ton per hour capacity Briquetting Plant with Komareck Presses, Rutledge fluxer and mixing equipment. Practically new.

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Complete line of General Equipment, Boilers, Engines, Generators, Pumps, Heaters, Tanks, Blowers, Fans, Machine Tools, etc. Write for details.

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OLD HICKORY, TENNESSEE

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